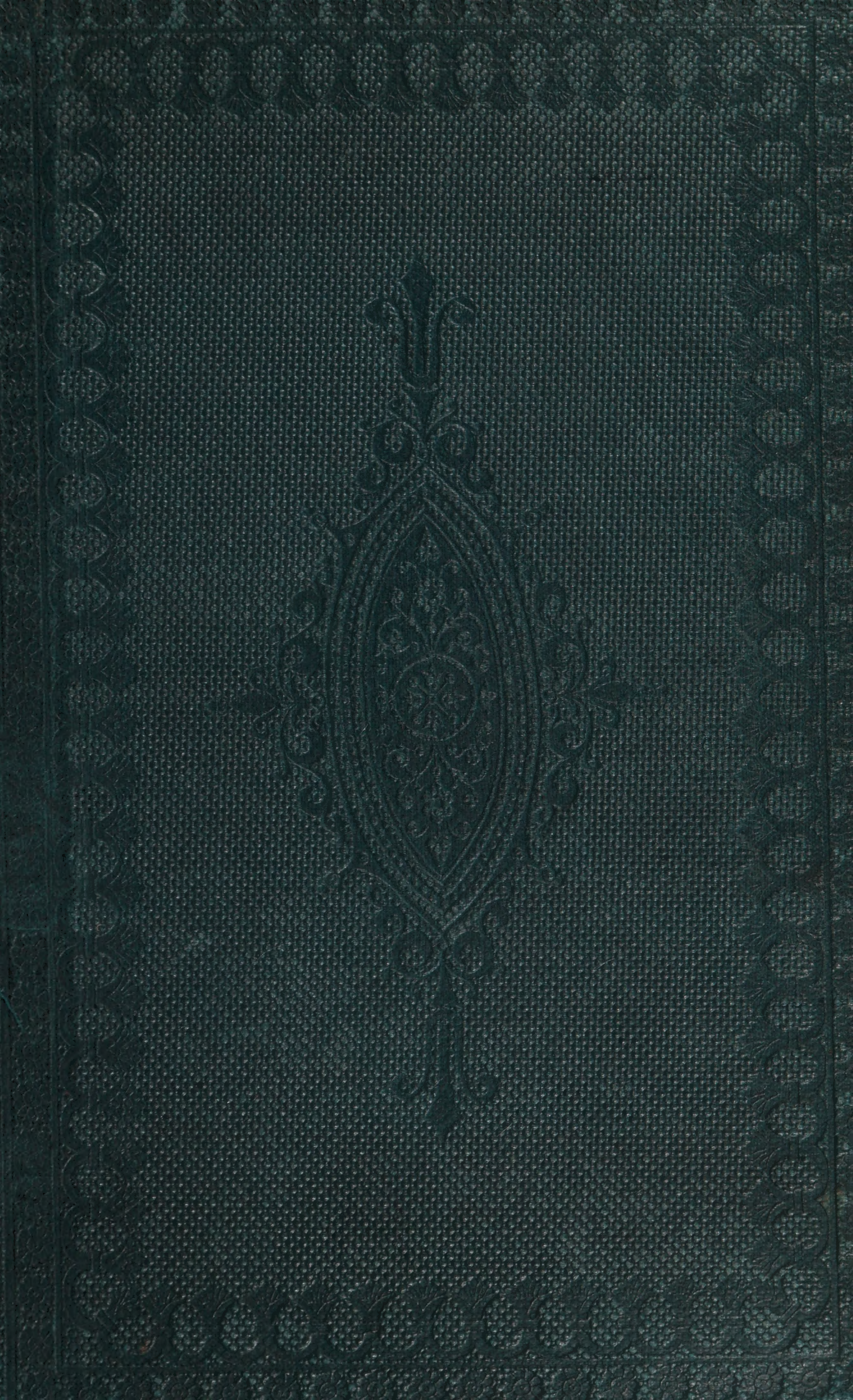

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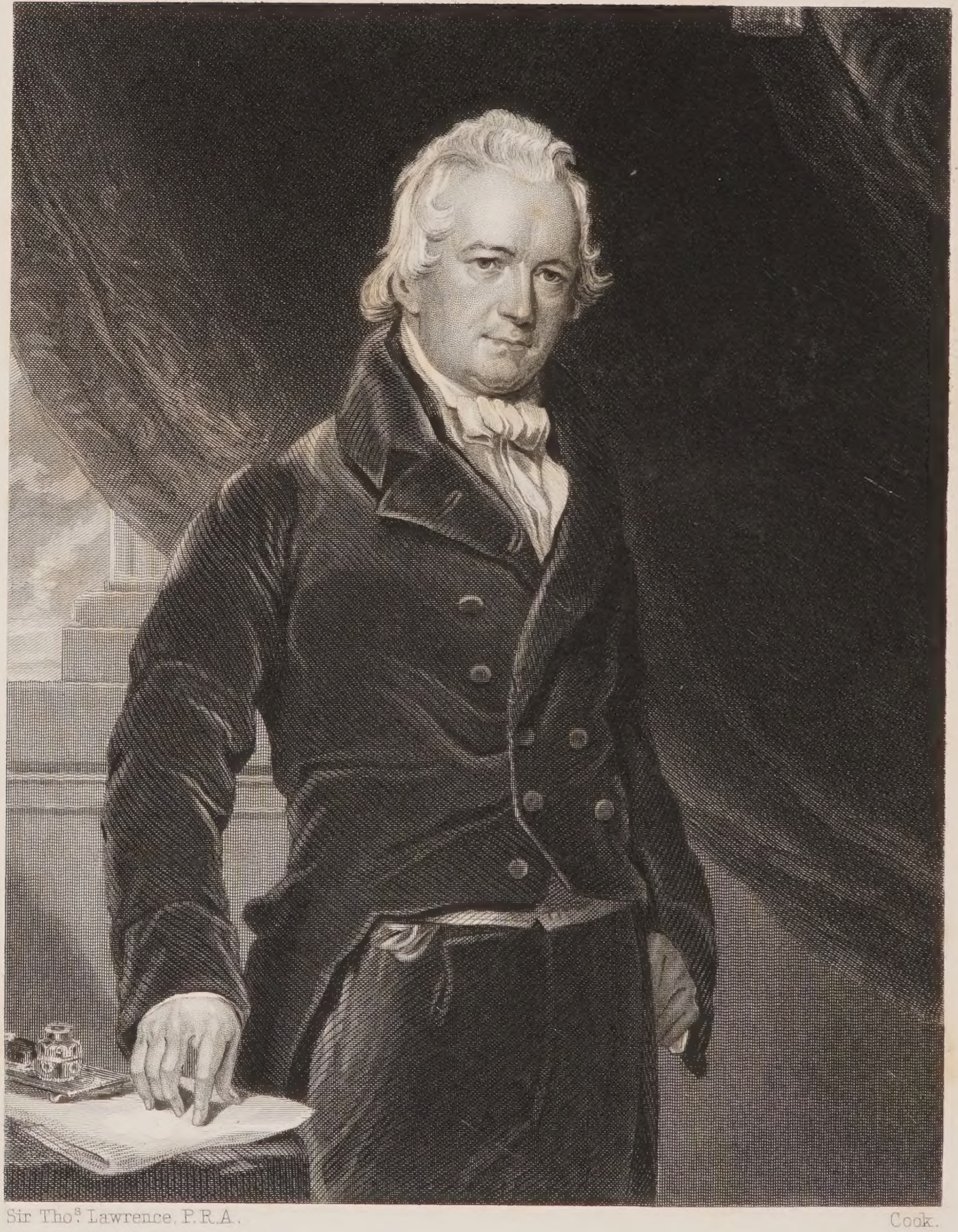
MEMOIRS

OF

JOHN ABERNETHY.



Sir Tho^{s} Lawrence, P.R.A. Cook.

Yrs most sincerely
John Abernethy

59825

MEMOIRS

OF

JOHN ABERNETHY,

WITH A VIEW OF

HIS LECTURES, HIS WRITINGS, AND CHARACTER;

WITH ADDITIONAL

EXTRACTS FROM ORIGINAL DOCUMENTS,

NOW FIRST PUBLISHED;

BY GEORGE MACILWAIN, F.R.C.S.

AUTHOR OF "MEDICINE AND SURGERY ONE INDUCTIVE SCIENCE,"
&c. &c. &c.

> "The evil that men do, lives after them:
> The good is oft interred with their bones."
> SHAKSPEARE.

Third Edition.

LONDON:
HATCHARD AND CO. PICCADILLY.
1856.

-BERNETHY, John [1764-1831]

BZP (abernethy)

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LONDON:
PRINTED BY J. MALLETT, WARDOUR STREET.

TO THE MEMORY

OF

JOHN ABERNETHY,

THIS VOLUME IS INSCRIBED

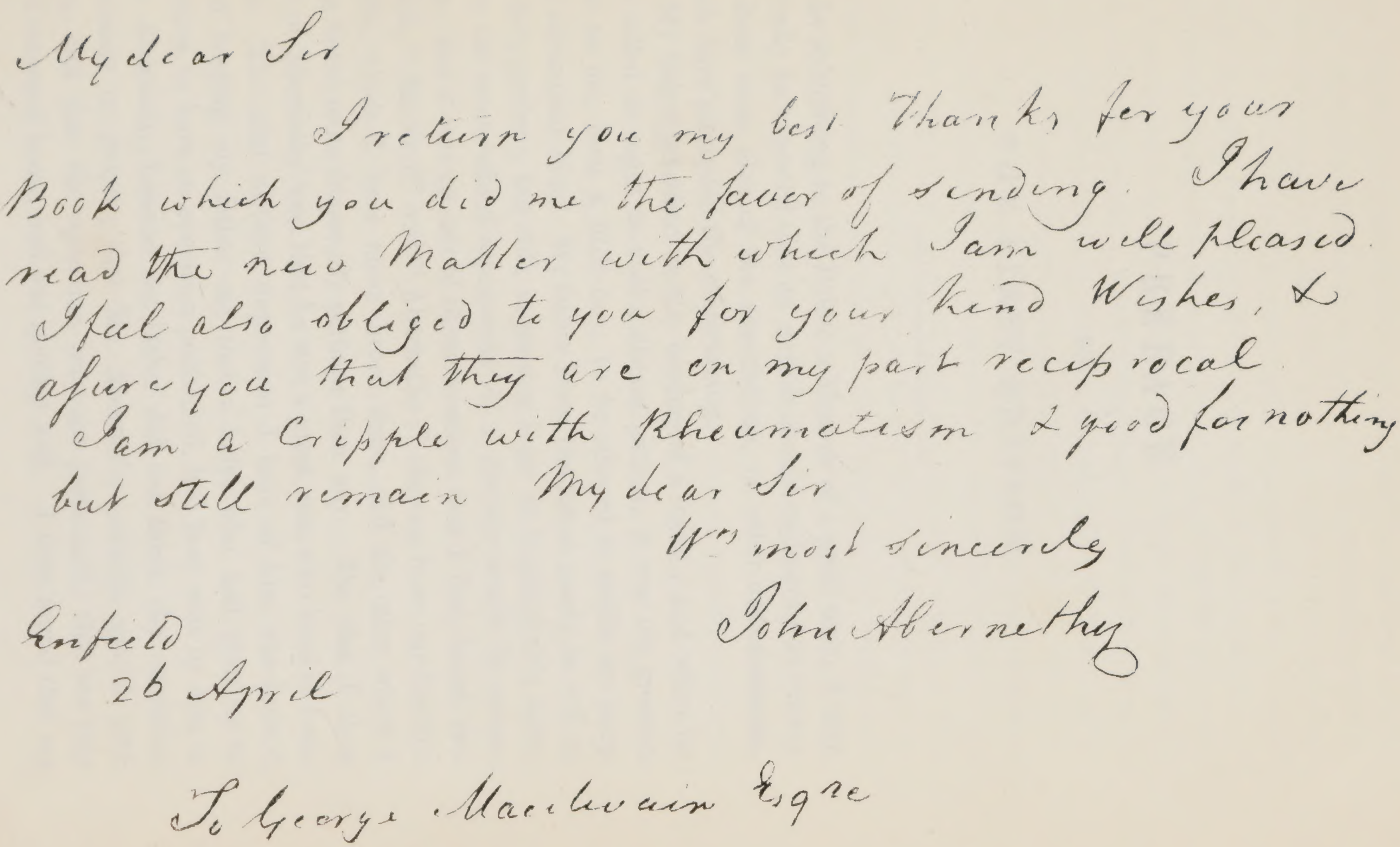
BY

ONE OF HIS NUMEROUS

AND

GRATEFUL PUPILS,

THE AUTHOR.



My dear Sir

I return you my best Thanks for your Book which you did me the favor of sending. I have read the new Matter with which I am well pleased. I feel also obliged to you for your kind Wishes, & aſsure you that they are on my part reciprocal. I am a Cripple with Rheumatism & good for nothing but still remain My dear Sir

Yrs most sincerely

John Abernethy

Enfield
26 April

To George Macilwain Esqre

PREFACE

TO

THE FIRST EDITION.

In submitting to the Public a Memoir of a great man, it may naturally be expected that an author should endeavour to convey to them some idea of the associations, or other circumstances, which have prompted the undertaking.

My father practised on the borders of a forest; and when he was called at night to visit a distant patient, it was the greatest treat to me, then a little boy, to be allowed to saddle my pony and accompany him. My father knew the forest nearly as well as his own garden; but still, in passing bogs in impenetrable darkness, the more refined topography of a forester would be necessary; and it was on one of these occasions that I first heard two words, "Me-ward" and "Abernethy:" the one from our forester guide, which I have never heard since, and the other which I have heard more frequently perhaps than any. The idea I then had of Abernethy was, that he was a great man who lived in London. The next distinct impression I have of him was derived from hearing my father say that a lady, who had gone up to London to have an operation performed, had been sent by him to Mr. Abernethy, because my father did not think the operation necessary or proper; that Mr. Abernethy entirely agreed with him, and that the operation was not performed; that the lady had returned home, and was getting well. I then found that my father had studied under him, and his name became a sort of household word in our family. Circumstances now occurred which occupied my mind in a different direction, and for some years I thought no more of Abernethy.

As long as Surgery meant riding across a forest with my father, I thought it a very agreeable occupation; but when I found that it included many other things, I soon discovered there was a profession I liked much better. Some years had rolled away, when, one afternoon in October, about the year 1816, somewhat to my own surprise, I found myself, about two o'clock, walking down Holborn Hill, on my way to Mr. Abernethy's opening lecture at St. Bartholomew's. Disappointed of being able to follow the profession I had chosen, looking on the one I was about to adopt with something very much allied to repulsion, considering everything in this world "flat and unprofitable," and painfully depressed in spirits, I took my seat at the lecture.

When Mr. Abernethy entered, I was pleased with the expression of his countenance. I almost fancied that he could have sympathized with the melancholy with which I felt oppressed. When he commenced, I listened with some attention; as he went on, I began even to feel some pleasure; as he proceeded, I found myself entertained; and before he concluded, I was delighted. What an agreeable, happy man he seems! thought I. What a fine profession! What would I give now to know as much as he does! In short, I was converted.

Years again rolled on. I found myself in practice. Now, I had an opportunity of proving the truth and excellence of the beautiful principles I had been taught. I found how truthful had been his representations of them. I was, however, grieved to find that his opinions and views were very much misunderstood and misrepresented; and I had very frequent opportunities of seeing how much this restricted their application, and abridged their utility.

Some few years after his death, I tried to induce some one to endeavour to correct the erroneous impressions which prevailed in regard to him; but to do Abernethy full justice, *would require a republication of his works, with an elaborate commentary.* This was a task involving too much time, labour, and expense, for any individual to undertake; whilst anything less, however useful or instructive to the public, must necessarily subject the author to a criticism which few are disposed to encounter.

But as it appeared to me that scruples like these stood in the way of that which was alike just to the memory of Abernethy and useful to the public, I was resolved at all hazards to undertake at least a Memoir myself. I shall say little of the difficulties of the task. I feel them to have been onerous, and I believe them to have been, in some respects, unexampled.

Apologies for imperfections in works which we are not obliged to write, are seldom valued: the public very sensibly take a work for what it is worth, and are ultimately seldom wrong in their decision. I have only said thus much, not in deprecation of criticism, so much as to show that I have not shrunk from what I deemed just and useful, on account of the somewhat oppressive sense I entertain of the risk or difficulty which it involves.

The scientific reader may, I fear, think that, in endeavouring to avoid too tedious a gravity, I may sometimes have been forgetful of the dignity of biographical memoir; but, in the difficulty of having to treat of subjects which, however important, are not always of the most popular kind, I have been obliged sometimes to think of the "*quid vetat ridentem.*" In the very delicate task of discussing subjects relating to some of my contemporaries, I have endeavoured simply to do Abernethy justice; and, beyond what is necessary for that purpose, have avoided any quotations or other matter calculated unnecessarily to revive or rekindle impressions which may as well be dismissed or forgotten. It may appear to some, that, in my remarks on the present state of professional affairs, I have been too free. I can only say, that I have stated exactly what I feel. I am earnestly desirous of seeing a better state of things; but I have no idea that we can materially improve that which we are afraid to examine.

I have to express my warmest thanks to several gentlemen for the readiness with which they have contributed their assistance; my most grateful acknowledgments to my respected friend, Mr. Fowler of Datchet, and his son, Mr. Alfred Fowler, Mr. Thacker and Mr. Tummins of Wolverhampton—three of them being old schoolfellows of Abernethy; to Mr. White, the distinguished head master of Wolverhampton School, whose acceptable services have been further enhanced by the ready kindness with which they were contributed; to Mr. Belfour, the Secretary of the Royal College of Surgeons, and Mr. Stone, the Librarian, I have to express my best thanks for their kind assistance; and to the latter especially, for many very acceptable contributions.

I have also to acknowledge the kind interest taken in the work by Mr. Wood of Rochdale, Mr. Stowe of Buckingham—old and distinguished pupils of Abernethy. My best thanks are also due to Dr. Nixon of Antrim, not only for his own contributions, but still more for the personal trouble he was so kind as to take in relation to some particulars concerning the ancestors of Mr. Abernethy; to Mr. Chevasse of Sutton Coldfield, for very acceptable communications; and to Mr. Preston of Norwich. Nor must I omit to express my obligation to several gentlemen whom I have consulted at various times. My thanks are specially due to Professor Owen. My old friends and fellow-pupils, Mr. Kingdon, Mr. E. A. Lloyd, Dr. Barnett, Mr. Skey, and Mr. Welbank, have shown as much interest in the work as their opportunities allowed them, and will please to accept my best acknowledgments.

G. M.

London, September 20, 1853.

PREFACE

TO

THE SECOND EDITION.

THE indulgent reception which the Public and the Profession have been pleased to accord to these Memoirs having already rendered a second edition necessary, the volumes have been carefully revised. This has enabled me to correct some typographical errors, and so to modify certain passages, that, whilst the narrative remains essentially the same, it may be in some points presented in an improved dress. I have also availed myself of the opportunity of making some additions and corrections, which, though few, are not unimportant.

Although not unacquainted with the fact that Mr. Abernethy had declined the honour of a Baronetcy, no allusion was made to it in the first edition; because I was not then in possession of such evidence as appeared to me necessary in relation to a circumstance that had not fallen within my own knowledge.

By the kindness of the family, I have been enabled to correct an error in regard to those who were present in his last moments; which, if in an historical point of view immaterial, is by no means so with regard to the feelings of those whom it more immediately concerns.

G. M.

The Court Yard, Albany,
Nov. 14, 1853.

PREFACE

TO

THE THIRD EDITION.

In publishing a third edition of these Memoirs, I have to express the grateful sense I entertain of the indulgence with which they continue to be received.

Since the appearance of the second edition, Miss Abernethy has kindly placed at my disposal the few papers which Mr. Abernethy had preserved; and I trust that the additions they have enabled me to make, may not prove unacceptable. Besides circumstances of minor interest, interspersed through the volume, there are some of great importance. The facts relating to the marriage of Mr. Abernethy not only disprove a number of idle reports, but offer another contribution to the general kindness and sincerity of his character. In selecting a few extracts from his thoughts on Religion and Morals, I have been desirous of placing on record some of Mr. Abernethy's sentiments on these all-important questions, without forgetting that I am writing the Memoirs, not of a Divine, but of a *Philosophical Physiologist* and *Surgeon.* In like manner, in the accompanying observations which I have submitted on the relations of Science and Religion, I have restricted myself to little more than a Layman's repudiation of a vulgar error. Some little anxiety to impress this may be excused, lest it should be supposed that an argument has been stated in a few pages, which, even in an abridged form, would require a volume; besides being inconsistent with the more measured objects of a Biographical Memoir. I have carefully avoided quoting any papers which, either by opinion or otherwise, reflected on the conduct of any party; and I have taken some pains to render this unnecessary. No man could be more sensitive than Abernethy with regard to any imputation on his honour; but that once satisfied, I am persuaded that nothing would have been more unwelcome to him than that his Memoirs should have contained, unnecessarily, one word that should offend any one; nor anything more acceptable than its avoidance under circumstances of provocation. I have had to contend with difficulties which I need not particularize; it is far more agreeable to express the gratitude I feel for that sympathy and assistance which have placed papers and documents at my disposal, with a generous confidence which, though scarcely easy sufficiently to appreciate, I trust it is impossible knowingly to abuse.

Should it appear that, in my anxiety to avoid disagreeable discussions, I have left any subject imperfectly handled, as regards the high character of Mr. Abernethy, I should of course avail myself of the documents now in my possession. I trust, however, nothing of the kind may be necessary. Having long thought it would be interesting to many persons, old pupils and others, to record his manner in his later days, when delivering his Surgical or Evening Lectures, as well as the position he was so accustomed to assume when enunciating the fundamental axiom of that improved Surgery of which he was the author, I have added the lithograph at page 219. For this artistic sketch I am indebted scarcely less to the painstaking than to the genius of the late Mr. Charles Blair Leighton, who, as stated in the text, did not live to realize those expectations of future excellence to which his talents had given rise. Mr. Leighton, after a short illness, died in May, 1855.

G. M.

The Court Yard, Albany,
November, 1856.

MEMOIRS.

ERRATA.

Page 312, line 20, *for* supplies *read* supply.

—— 324, line 10, from bottom, *for* Christianity *read* sin.

"The proposition is this:—I say that Local disease, injury, or irritation, may disturb the whole system, and conversely, disturbance of the whole system, may affect any part." (Surgical Lectures.)

MEMOIRS OF ABERNETHY.

CHAPTER I.

> "The Author of Nature appears deliberate throughout His operations, accomplishing His natural ends by slow successive steps. And there is a plan of things beforehand laid out, which, from the nature of it, requires various systems of means, as well as length of time, in order to the carrying on its several parts into execution."—Butler's Analogy.

A retrospect of the history of human knowledge offers to our contemplation few things of deeper interest than the evidence it so repeatedly affords of some great law which regulates the gradual development of truth, and determines the Progress of Discovery.

Although knowledge has, at times, appeared to exhibit something of uniformity in its advances, yet it cannot have escaped the least observant that, as a whole, the Progress of Science has been marked by very variable activity—at one time, marvellously rapid; at another, indefinitely slow; now merged in darkness or obscurity; and now blazing forth with meridian splendour.

We observe a series of epochs divided by intervals of great apparent irregularity—intervals which we can neither calculate nor explain; but which, nevertheless, exhibit a periodicity, which the very irregularity serves to render striking and impressive.

We may remark, also, a peculiar fitness in the minds of those to whom the enunciation of truth has been successively entrusted: a fitness, not merely for the tasks which have been assigned to each, as the special mission of the individual, but also in the relations of different minds to each other. This adaptation to ends which individual minds have unconsciously combined to accomplish, might be illustrated by many examples, from the earliest records of antiquity, down to our own times. This would be incompatible with our present purpose. We will therefore only refer to one or two illustrations, which, as being familiar, will serve to show what we mean, and to lead us, not unnaturally, to our more immediate object.

We cannot contemplate men like Bacon, Galileo, and Kepler, for example, without feeling how auspicious the precession of such minds must have been to the development of the genius of Newton*. Newton was born the same year that Galileo died. There is something very interesting and significant too in the peculiar powers of Kepler. Prolific in suggestion, great in mathematical ability, elaborate in analysis, and singularly truthful in spirit, Kepler exemplified two things. These, though very distinct from each other, were both equally instructive; both alike suggestive of the link he represented in the chain of progress. In the laws he discovered, he showed the harvest seldom withheld from the earnest search for truth; but the enormous labour of the mode in which he conducted his researches, as well as the limits prescribed to his discoveries, exemplify the evils which, even in a man of the greatest power, result from proceeding too much on hypothesis. Now it is interesting to remember that this was coincident with the dawning of that glorious light, the Inductive philosophy of Bacon, and shortly succeeded by the splendid generalization of Newton.

In like manner, if we think of the discoveries of Sir Humphrey Davy—their nature and relations to physiology as well as

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	Born.	Died.
* Galileo	1564	1642.
Kepler	1571	1630.
Bacon	1561	1626.
Newton	1642†	1727.

† The same year that Galileo died.

chemistry,—we see how much there might have been that was preparatory, and, to a mind like Davy's, suggestive, in the investigations of preceding and contemporaneous philosophers. Priestly had discovered oxygen gas; Galvani and Volta had shown those remarkable phenomena which constitute that important branch of knowledge, "Voltaic electricity;" Berzelius had effected the decomposition of certain salts by the Voltaic pile; and Lavoisier had even predicted as *probable* what Davy was destined to demonstrate*.

In medical science, few things have been more talked of than the discovery of the circulation of the blood. Now it is curious to observe that every fact essential to the demonstration of it had been made out by previous investigators† : but no one had deduced from them the discovery of the circulation until Harvey, although it was a conclusion scarcely more important than obvious.

There is surely something very encouraging in the reflection, that the advance of knowledge thus results from the accumulated labours of successive minds. It suggests, that however unequally the honours may appear to be distributed—however humble, in our eyes, the function of those who unconsciously prepare the way to great discoveries,—still it may involve a duty no less important than the more lofty mission of enunciating them. The importance of a man's mission can never be estimated by human judgment. We can never know the mission; still less its rela-

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	Born.	Died.
* Priestly	1733	1804.
Galvani.	1737	1798.
Volta.	1745	1826.
Lavoisier	1743	1794.
Crauford	1749	1795.
Hunter	1728	1793.
Davy	1778	1829.

† The valvular contrivances in the veins and heart, which showed that the blood could move in only one direction, had been either observed, described, or their effects respectively remarked on, by Paul, Sylvius, Michael Servetus, Realdus Columbus, Andreas Cesalpinus, and especially by Fabricius ab Aquapendente, of whom Harvey was a pupil.

tions to the power, or the temptations by which that power has been assailed. The most humble may here often approach as nearly to his duty, as the most gifted may have fallen short of it. Our faculties cannot penetrate the matter. We often see men placed in positions for which they appear wholly unfitted—men who seem to be bars to that progress which we should fancy it their duty to promote. Again, we observe that almost all great discoveries have to encounter opposition, persecution, obloquy, or derision; and when they are established, a host of claimants rise up to dispute the property with the rightful owner. A man who is in earnest cares little for these things. They may at times discourage and disappoint him; but they only strengthen his faith, that a day will come when an unerring justice will accord to every useful improvement its proper place and distinction.

Humanly speaking, we naturally ascribe discoveries to those who have practically demonstrated them; but when we examine all the clues which have been furnished by previous observers, we frequently have misgivings as to the justice of our decisions. In our admiration of the successful labour of the recent inquirer, we sometimes forget the patient industry of the early pioneer. With regard to those laws which govern the human body, we cannot suppose that the development of them can be destined to progress on any plan less determined than other branches of human inquiry. But in all laws of nature we know that there are interferences which, until explained, serve to obscure or altogether to conceal the law from our view.

In relation to the Physiological laws, these interferences are very numerous. 1st. Many are furnished by the physical laws; many more arise from the connection of the physiological with the moral laws, and especially from the abuse of (a responsible) volition. These interferences, however, when their nature is clearly developed, beautifully illustrate the laws they at first obscured; for the common characters of subjects, in which the law is usually exemplified, are brought out into higher relief by the very diversities in the midst of which they occur. The progress of mankind towards a popular familiarity with this fact, is necessarily slow; but still we think it plainly perceptible. An individual life, indeed, however distinguished, represents a mere point in time; it affords little scope for considering, much less for estimating, as they occur, the true meaning of various events, which nevertheless ultimately prove to have had important influence on the progress of knowledge.

These are world-wide things, which we must survey as the geologist does the facts concerning which he inquires. We must endeavour to combine, in one view, facts over which long periods of time may have rolled away, with such as are still passing around us. This will frequently suggest designs and relations altogether unobservable by the mere abstract inquirer. In the course of the following pages, a further opportunity may occur for a few remarks on such views; the elaborate discussion of the subject would be altogether beyond our present objects.

It will be our endeavour to point out the position occupied by Abernethy, in that (as we trust) gradually dawning science, to a particular phase of which our object and our limits will alike restrict our attention. We mean that period when Surgery, having approached to something like a zenith as a mere practical *art,* began to exhibit, by slow and almost imperceptible degrees, some faint characters of science—a shadowy commencement of a metamorphose, which we believe promises to convert (though we fear at a period yet distant) a monstrous hybrid of mystery and conjecture into the symmetrical beauty of an Inductive science—a science based on axioms and laws which are constantly exerting a powerful influence on the social progress and the health of nations.

In considering Hunter and Abernethy, we shall see not only a remarkable adaptation for the tasks in which they were respectively engaged, but also how the peculiar defects of the one were supplied by the characteristic excellences of the other. We shall see that they cooperated in laying open clear and definite objects; and that, though their modes of inquiry were far from fulfilling the requisitions of an Inductive science, they were eminently calculated to suggest the convenience, and impress the necessity of it.

We no sooner begin to inquire with clear and definite purpose, than we are led to the means necessary for the attainment of it.

Abernethy himself, in speaking of the ordinary resources of daily practice, used to say: "If a man has a clear idea of what he desires to do, he will seldom fail in selecting the proper means of accomplishing it."

So, in gathering the materials for building up a science, the first thing is, to be clear as to those things in which it is deficient. This once determined, all may lend assistance; and this very division of labour, when directed with definite purpose, may render even men most addicted to narrow and partial inquiries, contributors to a great and common object.

In this way, those blows and discouragements so common in the infancy of science, which test our motives and try our patience, may prove tolerable when distributed over the many, instead of proving, as is too common, depressing or destructive when bearing only on the efforts of the few.

If we desire to shorten this labour, we need scarcely say there is no way of doing it but by the adoption of that mode of proceeding to which every other branch of science owes its present position.

I mean the rigid suspension of all hypotheses, setting to work by collecting *all* the facts in relation to the subject, and dealing with them in strict compliance with the precepts of common sense—or, what is the same thing, Inductive philosophy.

This will soon show us the just amount of the debt we owe to Hunter and Abernethy; and, in leading us onwards, instructively point out why these great men did not farther increase our obligations.

We shall see how the industry and circumspection of the Argus-eyed Hunter, as Abernethy used to call him, enabled him to unfold a legend in nature, which he had neither length of days, sufficient opportunity, nor perhaps aptitude, wholly to decipher; and how far it was developed into practical usefulness by the penetrative sagacity and happy genius of Abernethy; which, like light in darkness, guides and sustains immediate research, and animates and encourages onward inquiry. To appreciate Abernethy, however, it is necessary that the public should have correct views at *least* of the *general* nature and objects of Medical Science.

The public have not only a very real interest in acquiring a sound common-sense view of the objects of medicine and surgery, but a far deeper interest than it is possible for any one medical man to have, merely as such, or all medical men put together. This may, for the moment, appear startling to those who have not been compelled to consider the subject; but the reader may glean even from this volume, that so long as life or health, or even money, has value, the remark is strictly true. From all sides mankind have hitherto imbibed little but error. They have been taught or induced to believe that the only objects of medicine and surgery are to prevent or relieve diseases and accidents by the astute employment of drugs, or by certain adroit manupilatory or mechanical proceedings, and *par excellence* by "operations." Now here is a great mistake—an idea so far from true, that nothing can more delusively define, or more entirely conceal, the higher objects of the science.

The direct contrary of the proposition would be nearer the truth. It would be *more* correct to say that the object was to relieve diseases and accidents by removing all interferences with the reparative powers of nature; and that this was accomplished more perfectly in proportion as we were enabled to *dispense* with the employment of drugs, or the performance of operations.

The making the lame to walk, the blind to see, and the deaf to hear, were chosen amongst the appropriate symbols of a Divine Mission; and we need scarcely observe, that, in the restricted sphere of human capacity, this is a portion of the mission of every conscientious surgeon.

We may well, therefore, be dissatisfied with the narrow, not to say degrading, definition of our duties too generally entertained; but, on the other hand, if we would realize our claims to these higher views of our calling, and enlarge the sphere of its practical usefulness, we should recollect there is only one way of attaining that object; and that is, by the applied interpretation of those symbols, no less miraculous, no less certain manifestations of Divine Power, the "Laws of Nature." To name a science from something not essential to it, is like naming a class of animals from some exceptional peculiarity in an individual. It is as if we would infer the mission of the ocean wave from the scum sometimes seen on its surface; or the purposes served by a feather, from the use we make of it in writing, rather than from its common character of levity and toughness; as if we treated an exception as a rule, or any other manifest absurdity.

We have no opportunity of entering more fully into this important distinction of the more lofty objects of our profession, as contrasted with those usually assigned to it; we must therefore rest satisfied in having awakened the reader's attention to the subject, and proceed to the more ordinary objects of Biographical Memoir.

John Abernethy was born in London, in the parish of St. Stephen's, Coleman Street, on the 3rd of April, 1764, exactly one year after John Hunter settled in London. It is also interesting to remark, that Abernethy's first work, his "Surgical and Physiological Essays"—Part I—was published the same year that Hunter died, 1793; so that, whilst his birth occurred nearly at the same time as the commencement of the more sustained investigations of Hunter, his opening contribution to science was coincident with the close of the labours of his illustrious friend and predecessor.

The Abernethy family in their origin were possibly Scotch, and formed one of those numerous inter-migrations between Scotland and the north of Ireland, which, after lapse of time, frequently render it difficult to trace the original stock. There seems little doubt they had resided for some generations in Ireland. John Abernethy, who was the pastor of a Coleraine congregation, in 1688, was an eminent Protestant dissenting minister, and the father of one still more distinguished. The son (also named John) had been for some time pastor of the old congregation of Antrim, whence he removed to Dublin about the year 1733, to take charge of the Wood Street, now Strand Street, Dublin. He is the author of several volumes of sermons, which are not a little remarkable for clearness of thought, and the earnestness of purpose, with which they inculcate practical piety. He had a son who was a merchant, who subsequently removed to London, and traded under the firm of Abernethy and Donaldson, in Rood Lane, Fenchurch Street. This gentleman married a lady whose name was Elizabeth Weir, daughter of Henry and Margaret Weir, of the town of Antrim, and they had two sons and three daughters.

James*, the elder brother, was also in business as a merchant, and died about the year 1823. He was a man of considerable talent, spoke with an accent suggestive of an Irish origin, and was remarkable for his admiration and critical familiarity with our immortal Shakspeare. He was probably born before his father left Ireland. John, the second son, the subject of our Memoir, was, as we have already said, born in London. The register of his christening at St. Stephen's is as follows :

1765.
Abernethy { John, son of
John and Elizabeth,
April, 24.

This register would suggest that he was born a year later than I have stated. I have, however, preferred 1764, as the year adopted by his family; for although a man's birth is an occurrence respecting the date of which he is not the very best authority, he usually gets his information from those who are. Besides, it was no uncommon thing at that time to defer the christening of children for a much longer period. The education of his early childhood was, most likely, altogether conducted at home; but it is certain that, while yet very young, he was sent to the Grammar School at Wolverhampton. Here he received the principal part of his education; and though the records are somewhat meagre, yet they tend to show that at an early age he manifested abilities, both general and peculiar, which were indicative of no ordinary mind; and which, though they do not necessarily prefigure the future eminence at which he arrived, were sufficiently suggestive of the probability that, whatever his career might be, he would occupy a distinguished position.

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* In a polite letter which I recently received from a distinguished pupil of Abernethy's (Dr. Butter, of Plymouth), I find that James Abernethy died of Apoplexy, at Plymouth.

CHAPTER II.

"Ah, happy hills! ah, pleasing shade!
Ah, fields beloved in vain,
Where once my careless childhood stray'd,
A stranger yet to pain."

GRAY.

MANKIND naturally feel an interest in the boyhood of men of genius; but it often happens that very little attention is paid to early indications; and, when observed, it is certain that they are often interpreted very falsely.

Nothing more emphatically suggests how much we have to learn on this subject, than the obscurity which so often hangs over the earlier years of distinguished men. At school, a number of variable organizations are subjected to very much the same influences; the necessity for generalization affords little opportunity for individual analysis. The main road is broad and familiar; there is no time for indulging in bye-paths, even should the master have the penetration to perceive, in individual cases, the expediency of such selection. Hence the quickening of those impulses, on which the development of character so much depends, is greatly a matter of uncertainty. The moment boys leave school, on the contrary, this uniformity of external influences is replaced by an interminable diversity; at home, scarcely two boys being subjected to exactly the same. Thus, in many instances, it would be easier to deduce the character of the boy from the man, than to have predicted the man from the boy. The evidences of the one are present to us, those of the other may have been entirely unelicited, unobserved, or forgotten.

We cannot wonder, then, that expectation should have been so often disappointed in the boy, or that excellences little dreamt of should have been developed in the man.

Dryden, who, regarded in the triple capacity of poet, prose-writer, and critic, is hardly second to any English author, took no honour at the University. Swift, perhaps our best writer of pure English, whose talents proved scarcely less versatile and extraordinary than they had appeared restricted and deficient, was "plucked" for his degree, in Dublin, and only obtained his recommendation to Oxford "*speciali gratia*," as it was termed. The phrase, however, being obviously equivocal, and used only in the bad sense at Dublin, was, fortunately for Swift, interpreted in a good sense at Oxford—a misapprehension which Swift, of course, was at no pains to remove.

Sheridan was remarkable for his readiness, his invention, and his wit; as a writer, he showed considerable powers of sustained thought also. He had an habitual eloquence, and, on one occasion, delivered an oration before one of the most distinguished audiences that the world ever saw*, with an effect that seems to have rivalled the most successful efforts of Cicero, or even Demosthenes. Yet he had shown so little capacity as a boy, that he was presented to a tutor by his own mother with the complimentary accompaniment that he was an incorrigible dunce.

Some boys live on encouragement, others seem to work best "up stream." Niebuhr, the traveller, the father of a son no less illustrious, with anything but an originally acute mind, seems to have overcome every disadvantage which the almost constant absence of opportunity could combine. Those who are curious in such matters might easily multiply examples of the foregoing description, and add others where—as in the case of Galileo, Newton, Wren, and many others—the predictions suggested by early physical organization proved as erroneous as the intellectual indications to which we have just adverted.

The truth is, we have a great deal to learn on the subject of mind, although there is no want of materials for instruction. Medicine and surgery are not the only branches of knowledge which require the aid of strictly inductive inquiry. In all, the materials (facts) are abundant.

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* We allude to his first speech on the trial of Warren Hastings.

In Abernethy there was a polarity of character, an individuality, a positiveness of type, which would have made the boy a tolerably intelligible outline of the future man. The evidence is imperfect; it is chiefly drawn from the recollections of a living few, who, though living, have become the men of former days; but still the evidence all inclines one way.

We can quite imagine a little boy, "careless in his dress, not slovenly," with his hands in his pockets, some morning about the year 1774, standing under the sunny side of the wall, at Wolverhampton Grammar School*; his pockets containing, perhaps, a few shillings, some halfpence, and a knife with the point broken, a pencil, together with a tolerably accurate sketch of "Old Robertson's" wig. This article, as shown in an accredited portrait† now lying before us, was one of those enormous bygone bushes which represented a sort of impenetrable fence round the cranium, as if to guard the precious material within. The said boy just finishing a story to his laughing companions, though no sign of fun appeared in him, save a little curl of the lip, and a smile which would creep out of the corner of his eye in spite of him. I have had the good fortune to find no less than three schoolfellows of Abernethy, who are still living: John Fowler, Esq. of Datchet, a gentleman whom I have had the pleasure of knowing for many years, and who enjoys, in honourable retirement at his country seat, at the age of eighty-two, the perfect possession of all his faculties; William Thacker‡, Esq. of Muchall, about two miles from Wolverhampton, who is in his eighty-fifth year; T. Tummins, Esq. of King Street, Wolverhampton, who is in his eighty-seventh year. To these gentlemen, and to J. Wynn, Esq. also of Wolverhampton, I am principally indebted for the few reminiscences I have been able to collect of the boyish days of Abernethy.

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* Wolverhampton School, founded by Sir Stephen Jermyn, Alderman and Knight of the City of London, in the reign of Henry VIII, for the "Instruction of youth in morals and learning." Many distinguished men were educated at the School; as Abernethy; Mr. Tork, fellow of Trinity College, Cambridge; Sir William Congreve; and others.

† Kindly sent us by Mr. Fowler, of Datchet.

‡ This gentleman died last year. He had retired to his seat at Muchall, from Wolverhampton, where he had practised as a solicitor of great eminence and respectability.

The information which I gained from Mr. Fowler, he gave me himself; he also kindly procured me a long letter from Mr. Wynn. The reminiscences of Mr. Tummins and Mr. Thacker, I have obtained through the very courteous and kind assistance of the Rev. W. White, the late* distinguished head master of the Wolverhampton School.

To all of these gentlemen I cannot too strongly express my thanks, for the prompt and kind manner in which they have replied to all the enquiries which have been addressed to them. The following are the principal facts which their letters contain, or the conclusions they justify. Abernethy must have gone to Wolverhampton when very young, probably; I should say certainly before 1774. He was brought by Dr. Robertson from London, with another pupil, "his friend Thomas;" and the "two Londoners" boarded with Dr. Robertson. When Mr. Fowler went there in 1778, Abernethy was high up in the school, and ultimately got to the head of the senior form. He must have left Wolverhampton in all probability not later than 1778, because Dr. Robertson resigned the head mastership in that year; and we know that in the following (1779), when he was fifteen, Abernethy was apprenticed to Sir Charles Blicke.

Mr. Thacker says he was very studious, clever, a good scholar, humorous, but very passionate. Mr. Tummins, Mr. Thacker says, knew Abernethy well. Abernethy used to go and dine frequently with Mr. Tummins's father. Mr. Tummins says "Abernethy was a sharp boy, a very sharp boy, and a very "passionate one too. Dr. Robertson," he says, "was also a "very passionate man."

One day, Abernethy had to "do" some Greek Testament;

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* Since the last edition, I have to regret the death of this gentleman. He was an excellent man, a good mathematician, and an accomplished scholar. He graduated at Cambridge, and took honors in 1815.

and it appeared that he set off very glibly, having a "crib" in the shape of a Greek Testament, with a Latin version on the other side. The old Doctor, suspecting the case, discovered the crib, and the pupil was instantly "levelled with the earth." This *fortiter in re* plan of carrying the intellect by a *coup-de-main*, has, as the late head master observed, been replaced by more refined modes of proceeding. The more energetic plan was (however coarse and objectionable) not always unsuccessful in implanting a certain quantity of Latin and Greek. Abernethy was a very fair Latin scholar, and he certainly had not, at one period, a bad knowledge of Greek also.

There are, however, many other things to be learnt besides Latin and Greek; and it is probable that the more measured reliance on such violent appeals, which characterizes modern education, might have been better suited to Abernethy. To a boy who was naturally shy, and certainly passionate, such mechanical illustrations of his duty were likely to augment shyness into distrust, and to exacerbate an excitable *temper* into an irritable *disposition.*

Abernethy, in chatting over matters, was accustomed jocularly to observe that, for his part, he thought his mind had, on some subjects, what he called a "*punctum saturationis;*" so that "if you put anything more into his head, you pushed something out." If so, we may readily conceive that this plan of forcing in the Greek, might have forced out an equivalent quantity of patience or self-possession. It is difficult to imagine anything less appropriate to a disposition like Abernethy's than the discipline in question. It was, in fact, calculated to create those very infirmities of character which it is the object of education to correct or remove.

It seems that neither writing nor arithmetic were taught in the school; and "Tummins and Abernethy" used to go to learn these matters at the school of a Miss Ready, in King Street, Wolverhampton. This lady appears to have had, like Dr. Robertson, a high opinion of what the profession usually term "local applications" in the conduct of education. Many years afterwards, she called upon Mr. Abernethy. He was then in full practice in London. He received her with the greatest kindness, begged her to come and dine with him as often as she could while she stayed in London; and, introducing her to Mrs. Abernethy, said: "I beg to introduce to you a lady who has boxed my years many a time."

Had Miss Ready, however, heard us call in question the necessity of this association of boxing ears and quill-driving, she would probably have retorted on us, that few men wrote so good a hand as John Abernethy. It is certain that, *brusque* as the discipline might have been, or ill-suited to the disposition of Abernethy, it did not interfere with the happiness of his schoolboy life. He always looked back to his days at Wolverhampton with peculiar pleasure, and seemed to regard every association with the place with affectionate remembrance.

Mr. Wynn observes, in his letter: "About twenty years ago "I accompanied a patient to Mr. Abernethy. After prescribing, "he said, 'let me see you again in about a week.' 'We cannot, "for we are returning into the country.' 'Why, where do you "live?' 'Wolverhampton.' 'Wolverhampton? Why, I went "to school there. Come, sit down, and tell me who's alive and "who's dead.' After running over the names of some of the old "families, their health, circumstances, &c. he wished us good "morning, saying, 'Ah! I cannot forget Wolverhampton!'"

Mr. Thacker's note I subjoin, written in a good firm hand, at eighty-five.

"Muchall, near Wolverhampton,
"May 17, 1852.

"Sir,

"As a boy, I remember John Abernethy and William Thomas "coming from London to board with, and as scholars to, Dr. "Robertson, the head master of the Wolverhampton School, in "which there were two masters, both clergymen. We were "formed into several classes, in which John Abernethy, William "Thomas, Walter Acton Mosely, and myself, formed one. Aber"nethy took the head or top of the class; but the boys used to "change places in the classes according to their proficiency; but

"I do not recollect that Abernethy ever took a third place in the "class. So also in his sports, he usually made a strong side, for "he was remarkably quick and active, and soon learned a new "game. He had but one fault that I knew of—he was rather "hasty and impetuous in his manner, but it was soon over and "forgotten.

"The 'Doctor,' as we used to call him (Robertson), had a "daughter grown up, and she used to hear the boarders in the "house read plays before her father, in which, in particular "passages, she showed where the emphasis should be laid, and "how to pronounce the same properly; this occasioned the use "of the play of 'Cato,' and originated the boys' performance of "that play in the school-room before their fathers and friends. "I do not remember the part that Abernethy took in that play. "I have applied to Mr. Tummins of Wolverhampton, but his "memory does not supply information. He knew Mr. Abernethy "well.

"If I recollect any others of my schoolfellows who knew "him, I will apply to them for information, and communicate the "same to you immediately.

"I am, Sir,
"Your obedient servant,
WILLIAM THACKER.

"To George Macilwain, Esq."

We learn from another reminiscent, that in the play at Wolverhampton Abernethy took a "principal part." He certainly had a good deal of dramatic talent, in the highest sense of the word; and, as will be seen in the sequel, could light up a story with rich humour, or clothe it with pathos, as suited the occasion, with equal facility. Scanty as they are, there is much in these school reminiscences significant of his future character.

As we have observed, Abernethy left Wolverhampton in 1778. He was then head of the school, a quick, clever boy, and more that an average scholar. He returned to London, that world of hopes, fears, and anxieties; that spacious arena, on which all are desirous of entering as competitors who are ambitious of professional or commercial distinction.

CHAPTER III.

> "Nunquam ita quisquam bene subductâ ratione ad vitam fuit
> Quin res, ætas, usus, semper aliquid apportet novi
> Aliquid moneat; ut illa quæ te scire credas, nescias:
> Et quæ tibi putâris prima, in experiundo repudias."
>
> TER. AD. A. 5, SC. 4.

> "Never did man lay down so fair a plan,
> So wise a rule of life, but fortune, age,
> Or long experience made some change in it,
> And taught him that those things he thought he knew,
> He did not know, and what he held as best
> In practice, he threw by."
>
> COLMAN.

CIRCUMSTANCES, in themselves apparently unimportant, often determine the selection of a profession. Few boys can do exactly what they please, and the *pros* and *cons* are seldom placed before them in a way to assist them in determining the just value of the reasons on which their choice may have proceeded. They are not, indeed, unfrequently dealt with as if, whilst not incompetent to make choice of a profession, they were held incapable of weighing the circumstances by which alone such choice could be judiciously directed. The absurdity of this appears, when we think a moment of what it involves, which is nothing less than expecting them to do what is impossible; viz. to form an opinion on a subject when the main facts in relation to it are withheld from them. Be this as it may, every day shows us that men are too frequently dissatisfied with the profession which they follow.

The question of our boyhood recollections—

> "Qui fit Mæcenas ut nemo quam sibi sortem,
> Seu ratio dederit seu fors objecerit, illâ,
> Contentus vivat?"*

is just as applicable as ever; and although human nature has almost everything ascribed to its natural infirmities, yet it appears quite as sensible, and not a whit less humble, to conclude, that paths chosen without consideration naturally lead to disappointment. The evil, like most others, carries with it the elements of self correction.

Parents are slow to encourage their children to select paths which they themselves have trodden with regret. This tends to distribute their professions to other families. Mutual interchanges of this kind serve to protect the interests of society, by, in some degree, limiting the number of cases in which men have failed to select the pursuits best adapted to them.

In almost all pursuits of life, success is determined, much more than many are disposed to imagine, by the homely qualities of steadiness and industry. We are apt—and sometimes not improperly—to ascribe peculiar *excellence* to peculiar powers. Yet the more insight we obtain into the histories of men, the more we perceive how constantly the most brilliant have been aided by the more homely qualifications to which we have adverted.

No doubt some minds are so constituted as to be moderately certain of success or distinction in almost any pursuit to which they might have been directed; and we are disposed to think that Abernethy's was a mind of that order; but there is abundant evidence to show that his talents were at least equalled by his industry. One paper of his, which contains a beautiful and discriminative adjustment of a difficult point of practice in Injuries of the Head—which contains no intrinsic evidence of such industry—was not published until after he had attended to every serious injury of the head in a large hospital for almost twenty years;

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* "How happens it, Mæcenas, that no one is content with his condition, whether reason gave it him, or chance threw it in his way?"

besides examining the bodies of all the fatal cases. Nor can we estimate this industry properly, without recollecting that all this time he was only an *assistant surgeon,* whose duties, for the *most* part, neither required nor *permitted* him to do more than to *observe* the treatment; and that, therefore, the whole of this industry was simply in the character of a student of his profession*. All biography is full of this kind of evidence; and art, as well as science, furnishes its contribution. Who could have imagined that the peculiar, chaste composition, the easy and graceful touch of Sir Augustus Callcott, could have owed so much to industry as it undoubtedly must have done? It is known, for example, that he made no less than forty different sketches in the composition of one picture. We allude to his "Rochester." Had Abernethy been allowed to choose his profession, he, no doubt, would have selected the Bar. It is impossible to reflect on the various powers he evinced, without feeling that, had he followed the law, he would have arrived at a very distinguished position. "Had my father let me be a lawyer," he would say, "I should have known every Act of Parliament by heart." This, though no doubt intended as a mere figure of speech, was not so far from possibility as might be imagined, for it referred to one of his most striking characteristics; viz. a memory alike marvellously ready, capacious, and retentive — qualities common enough separately, but rare in powerful combination.

We may have opportunities by and by, perhaps, of further illustrating it. We will give one anecdote here. A gentleman, dining with him on a birthday of Mrs. Abernethy's, had composed a long copy of verses in honour of the occasion, which he repeated to the family circle after dinner. "Ah!" said Abernethy, smiling, "that is a good joke, now, your pretending to have written those verses." His friend simply rejoined, that, such as they were, they were certainly his own. After a little good-natured bantering, his friend began to evince something like annoyance at Abernethy's apparent incredulity; so, thinking it was time to finish the joke, "Why," said Abernethy, "I know those verses very well, and could say them by heart*." His friend declared it to be impossible; when Abernethy immediately repeated them throughout correctly, and with the greatest apparent ease. To return. However useful this quality might have been at the Bar, Abernethy was destined to another course of life—a pathway more in need, perhaps, of that light which his higher qualifications enabled him to throw over it, and which "his position" "in time" afforded him an opportunity of doing just when it seemed most required. He probably thus became, both during life and prospectively, the instrument of greater good to his fellow-creatures than he would have been in any other station whatever.

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* The assistant-surgeons at that period having no *in*-patients under their care, except in the absence, or by permission, of their chiefs.

I have not been able to discover what the particular circumstances were which determined his choice of the medical profession. It is probable that they were not very peculiar. A boy thwarted in his choice of a profession, is generally somewhat indifferent as to the course which is next presented to him; besides, as his views would not have been opposed but for some good reason, a warm and affectionate disposition would induce him to favour any suggestion from his parents. Sir Charles Blicke was a surgeon in large practice; he lived at that time in Mildred's Court, and Abernethy's father was a near neighbour, probably in Coleman Street.

Abernethy had shown himself a clever boy, a good scholar; and he was at the top of Wolverhampton School before he was fifteen. Sir Charles Blicke was quick-sighted, and would easily discover that Abernethy was a "sharp boy." All that Abernethy probably knew of Sir Charles, was, that he rode about in his carriage, saw a good many people, and took a good many fees, all of which, though perhaps presenting no particular attractions for Abernethy, made a *primâ facie* case, which was not repulsive.

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* A public journalist was inclined to give this anecdote to another person. We then stated that we had it on the authority of a gentleman who was present. Such power of memory, though *rare*, is not *singular*: other examples have fallen within our own observation.

Accordingly, in the year 1779, being then fifteen years of age, he became bound an apprentice to Sir Charles, and, probably, for about five years.

This first step, this apprenticing, has a questionable tendency as regards the interests of the public and the profession. It exerts, also, a considerable influence on the character and disposition of the boy, which we must by and by consider. It is a mode of proceeding which, we fear, has done not a little to impede the progress of surgery as a science, and to maintain that handicraft idea of it suggested by the etymology of the word. Where one man strikes out a new path, thousands follow the beaten track. A boy, with his mind ill-prepared, having no *definite* ideas of the nature and objects of scientific inquiries, and almost certainly uninstructed as to the rules to be observed in conducting them—knowing neither any distinction between an art and a science—a boy thus conditioned is bound for a certain number of *years!* to a man of whom he knows little, and to a profession of which he knows nothing. He takes his ideas and his tone from his master; or, if these be repulsive to him, he *probably adopts an opposite extreme.* If the master practise his profession merely as an art, he furnishes his pupil with little more than a string of conventionalisms; of which, if the pupil has talent enough to do anything for himself, he is tolerably certain to have a great deal to unlearn.

We believe the system is in course of improvement; it is high time it was put an end to altogether. Apprenticeships might not have been an inauspicious mode of going to work in former times, when there existed barber-surgeons. This alliance of surgery and shaving, to say nothing of the numerous other qualifications with which they were sometimes associated, might conceivably enough have furnished some pretext for apprenticeships; since Dickey Gossip's definition of

> "Shaving and tooth-drawing,
> Bleeding, cabbaging, and sawing,"

was by no means always sufficiently comprehensive to include the multifarious accomplishments of "the doctor." I have myself seen, in a distant part of this island, within twenty-five years, chemist, druggist, surgeon, apothecary, and the significant &c. followed by the hatter, hosier, and linen-draper, in one establishment; but as we shall have to discuss this subject more fully in relation to Abernethy in another place, we may proceed.

Sir Charles Blicke had a large and lucrative practice. He had the character of taking care to be well remunerated for his services. He amassed a considerable fortune; but we incline to think that the ideas of the profession which Abernethy derived from his experience of his apprenticeship were not very favourable. The astute, business-like mode of carrying on the profession, which seems to have characterized Sir Charles Blicke's practice, could have had few charms for Abernethy. Mere money-making had never at any time much attraction for him, and, at that period of his life, probably none at all; whilst the measured pretensions of surgery to anything like a science could hardly have been, at times, otherwise than repulsive.

The tone in which he usually spoke of Sir Clarles's practice did not convey a very favourable idea of the impression which it had left on him. In relating a case, he would say: "Sir Charles was at his house in the country, where he was always on the look out for patients." On another occasion, speaking of patients becoming faint under peculiar circumstances, he observed: "When I was an apprentice, my master used to say: 'Oh, Sir! you are faint; pray drink some of this water.' And what do you think was the effect of his putting cold water into a man's stomach under these circumstances? Why, of course, that it was often rejected in his face."

Sir Charles's manipulatory and operative proceedings seem, however, to have represented a tolerably adroit adoption of the prevailing modes of practice; while his medical surgery consisted chiefly of the empirical employment of such remedies as he had found most frequently successful, or, at all events, somehow or other associated with a successful issue; with the usual absence of any investigation of the cause of either success or failure. By a mind like Abernethy's, this sort of routine would be very soon acquired, and, in a short time, estimated at its real value.

Still, while a clear head is all that is necessary to the reception of what may be positive and truthful, it requires a vivid perception and a cultivated understanding to detect error. Many things, however, would creep out in Abernethy's lectures, showing that, young as he was, even during his apprenticeship, he was not only a real student, but he had begun to think for himself.

He mentions a case of "Locked-jaw," that occurred as early as 1780 (the first year of his apprenticeship), which he appears to have noted with great accuracy. He mentions the medicine that was given to the man, the unusually large doses, and, lastly, the enormous quantity of it which was found in the stomach after death. It was opium, and amounted to many drachms.

We also find him engaged in inquiries involving much more extended views than were in that day *generally* associated with the study of *surgery*. He very early participated in those researches which had for their object to determine the relation of the digestive functions to one of the most recondite affections of an extremely important organ (the kidney).

"When I was a boy," said he, "I half ruined myself in buying oranges and other things, to ascertain the effects of different kinds of diet in this disease."

The same researches show how early also he began to perceive the importance of chemistry in investigating the functions of different organs, and in *aiding*, generally, physiological researches. We have heard a contemporary and a lecturer on chemistry attest Abernethy's proficiency in that science. As his investigations proceeded, he had the still higher merit of taking *just and sober views* of the relations of chemistry to physiological science.

We mean that whilst he fully recognized the importance of it, he entirely avoided that *exclusive* reliance on it which is too often created by some of the more striking demonstrations of chemical science; that one—idea—tendency, which unconsciously wrests it to the solution of phenomena which, in the *present state* of our knowledge, it is wholly inadequate to explain. We have alluded to the foregoing facts touching the impressions derived from his apprenticeship, and his early disposition for philosophical research, because both will be found to have relations to his subsequent labours and peculiarities. Diligent as he was, we suspect he found, during his apprenticeship, little of those attractions which make labour and industry sources of happiness and pleasure.

As a matter of course, he would have been allowed to attend any lectures which were given at the hospital to which Sir Charles Blicke was surgeon (St. Bartholomew's), and this would bring him in contact with Mr. Pott, who delivered a certain number of surgical lectures there.

There were no *courses* of anatomical lectures given at St. Bartholomew's at that period; but anatomical lectures were delivered regularly at the London Hospital, by Dr. Maclaurin and Sir William Blizard, and afterwards by Sir William Blizard alone. As Sir Charles Blicke lived in Mildred's Court and subsequently in Billiter Square, Abernethy would be about equidistant from the two hospitals, both of which he attended. We incline to think that it was in attending these lectures, and perhaps especially those of Sir William Blizard, that he first found those awakening impulses which excited in him a real love for his profession.

It was about this time, we think, that he began to have more enlarged ideas of the nature and objects of surgical science; a state of mind calculated to enable him to thoroughly understand and appreciate Mr. Hunter, and to deduce from the principles which he was shadowing forth, those relations and consequences which we shall endeavour popularly to explain; principles which, though originally directed to the treatment of so-called surgical maladies, were found equally to affect the practice of medicine.

CHAPTER IV.

> "There is not a more pleasing exercise of the mind than gratitude. Were there no positive command which enjoined it, nor any recompense laid up for it hereafter, a generous mind would indulge in it, for the natural gratification which accompanies it."—ADDISON.

SIR WILLIAM BLIZARD was an eminent surgeon and an enthusiastic student of the profession, as studied in his day. He had a certain bluntness of manner, which was not unkind neither. He was very straightforward, which Abernethy liked; and he had nothing of a mercenary disposition, which Abernethy held in abhorrence. He was a kind of man very likely to excite in one of Abernethy's tone of mind many agreeable impressions. He early perceived the talents, and was probably the first to encourage the industry, of his distinguished pupil. Enthusiastic himself, he had the power of communicating a similar feeling to many of his pupils; and he appears to have contributed one of those impulses to Abernethy which are from time to time necessary to sustain the pursuit of an arduous profession.

Some men seem to like anatomy for its own sake; examinations of structure merely, by dissection, or the microscope, have a kind of intrinsic charm for them. This was not the case with Abernethy. *Mere* anatomy had few charms for him. He regarded it in its true light, as a means to an end; as the basis on which he could alone found, not only the more common or handicraft duties of surgery, but also those higher views which aim at developing the uses and relations of the various organs; and in this way to ascertain what the processes of nature are in the preservation of health and the *conduct of disease;* in short, a knowledge of what he called physio-pathology.

Sir William, therefore, in exciting Abernethy's enthusiasm at this time, was probably of great service. He was thus impelled to pursue the study of anatomy, which perhaps might otherwise have failed to interest him sufficiently, whilst his attention was by no means diverted from the real purposes of that study. On the contrary, he always saw anatomy, as it were, through a physiological medium. This threw a pleasure into his anatomical pursuits, and was *one* of the means by which, in his own lectures, he contrived to impart an interest to the driest parts of our studies.

Many years afterwards, he was fond of illustrating the true relations of anatomy and physiology, and at the same time contrasting the attractions of the one with the comparatively repulsive requisitions of the other, by saying, with Dr. Barclay, of Edinburgh, that "he never would have wedded himself to so ugly a witch (anatomy), but for the dower she brought him (physiology)." The impressions which he derived from Sir William Blizard were deep and durable. More than thirty years after, when he himself was at the zenith of his career, we find his grateful feeling towards Sir William still glowing warm as ever. He seems to have considered the expression of it as the most appropriate opening to the first of the beautiful lectures which he delivered at the College of Surgeons in 1814. It must have been a moment of no small gratification to Sir William, who was present, now venerable with age, to have found that the honourable course of his own younger days, and the purity and excellence of his precepts, had all been garnered up in the heart of his grateful and most distinguished pupil. Nor could the evidence of it be well made more striking than when heralded forth before an audience composed of the most venerable and experienced, as well as of the most rising members of the profession; and, to crown the whole, with an eloquence at once modest and emotional, impressive of the depth and sincerity with which the eulogium was delivered.

It is difficult to imagine a scene more moving to the master, more gratifying to the pupil, or more honourable to both. As the style was very characteristic, we select a few passages. He commences the lecture by saying, of Sir William Blizard, that "he was my earliest instructor in anatomy and surgery, and I am "greatly indebted to him for much valuable information. My "warmest thanks are also due to him for the *interest he excited* "*in my mind towards these studies,* and for his excellent advice. "'Let your search after truth,' he would say, 'be eager and con-"stant. Be wary in admitting propositions to be facts, before "you have submitted them to the strictest examination. If, after "this, you believe them to be true, never disregard or forget *any* "*one* of them, however unimportant it may at the time appear. "Should you perceive truths to be important, make them motives "of action. Let them serve as springs to your conduct. If we "*neglect to draw such inferences,* or to act in conformity with "them, we fail in essential duties!'" Again, in remarking how Sir William excited his enthusiasm by the *beau-idéal* which he drew of the medical character, Mr. Abernethy observed: "I "cannot tell you how splendid and brilliant he made it appear; "and then he cautioned us *never* to tarnish its lustre by any "disingenuous conduct, or by anything that bore even the "*semblance* of dishonour." Abernethy, then proceeding in a strain, warm, yet apologetic (Sir William being present), at length concluded his public thanks to his venerable instructor, by saying, "what I have now stated is a tribute due from me to "him; and I pay it on the present occasion in the *hope* that the "same precepts and motives may have the same effects on the "junior part of my audience as they were accustomed, in general, "to have on the pupils of Sir William Blizard."*

Abernethy then proceeded to advocate similar lofty views of the nature and duties of our profession in the following manner: "That which most dignifies man, is the cultivation of those "qualities which most distinguish him from the brute creation. "We should indeed seek truth for its importance, and act as the

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* Sir William was a good surgeon and an excellent man. He was born at Barnes, in Surrey, and practised his profession until his death, which took place at the advanced age of ninety-three. One of his eyes was affected with cataract, which was removed by operation when he was ninety-one. He was enthusiastically fond of his profession, and was chiefly remarkable for his zealous observance of its honourable practice, and his indifference to lucre. He died in 1835.

“dictates of reason direct us. By exercising ou rminds in the “attainment of medical knowledge, we may improve a science of “great public utility. We have need of enthusiasm, or of some “strong incentive, to induce us to spend our nights in study, “and our days in the disgusting and health-destroying duties of “the dissecting-room, or in that careful and distressing observa-“tion of human diseases and infirmities which can alone enable “us to alleviate or remove them; some powerful inducement,” he adds, “exclusive of fame or emolument (for, unfortunately, “a man may attain a considerable share of reputation and *prac-“tice, without being a real student of his profession).* I place “before you the most animating incentive I know of—that is, “the enviable power of being extensively useful to your fellow-“creatures. You will be able to confer that which sick kings “would fondly purchase with their diadems, which wealth cannot “command, nor state nor rank bestow:—to alleviate or remove “disease, the most insupportable of human afflictions; and “thereby give health, the most invaluable of human blessings.”

When Abernethy entered the London Hospital, he soon gave proofs that Sir William’s lessons were not unfruitful. He was early employed to prepare the subject for lecture. Anatomy is usually taught by combining three plans.

In one, the various structures—muscles, vessels, nerves, &c. —are exposed, by the removal of their covering and connecting-tissues, and so displayed as to be clear and distinct. This is “dissecting for lecture;” and it is the duty of the lecturer to describe the connections and immediate uses of the parts so displayed.

The body is then laid on a clean table, covered with a white cloth, and everything is ready. There is some difference in these matters in different hands; but attention to order and cleanliness goes a long way in facilitating anatomical pursuits. To many there may be much that is disagreeable in anatomy; but we are persuaded that a coarse and vulgar inattention to decency has often alone rendered it disgusting or repulsive.

The other plan is not materially different from the foregoing, excepting that it is generally done by the anatomical assistant—

technically, the "demonstrator." The parts, having been somewhat exposed, are left, as much as is consistent with clearness, in their natural and *relative* positions; and the vessels, nerves, muscles, &c. which have been for the most part described *separately* by the lecturer, are now "demonstrated" (as the phrase is) *together*. The relative positions of all parts are thus more especially impressed on the student. In these "demonstrations" there is the same attention to covering the body with a cloth, &c. as in the lecture.

Lastly, the pupil is required to make out the parts by dissecting them himself, with such occasional assistance as may be at first necessary, and which is given by the demonstrator, who attends in the room for that purpose.

Now these duties (the lecture only excepted) were early performed by Abernethy. We may safely infer from this, that he was distinguished by his industry and zeal in the pursuit of knowledge, and that he began thus early to cultivate that power of communicating what he knew to others; in the exercise of which he ultimately acquired a success, a *curiosa felicitas,* in which he excelled all his contemporaries. That special qualifications were already discernible, we may infer from the post he occupied being invariably filled by a pupil of the hospital to which the school belongs; whereas Mr. Abernethy was an apprentice of a surgeon of St. Bartholomew's. On the testimony of a contemporary and fellow-student, Mr. W. W. Cox, late of Wolverhampton, we learn that he began to individualize himself very early. That, at the London Hospital, "he was for the most part reserved, seldom "associating with any of the other students, but sitting in some "place or corner by himself, diligently intent on the business of "the lecture." Sir William Blizard is known to have felt proud of him, and to have soon indulged in great expectations from his character and talents.

I have already observed that Abernethy had the advantage of attending also the Surgical Lectures of Mr. Pott, at St. Bartholomew's. Mr. Pott was a gentleman, a scholar, and a good writer, and seems to have been a spirited and attractive lecturer. In an oration delivered by by Sir William Blizard, in 1815, it is said that “ it was difficult to give an idea of the elegance of his “ language, the animation of his manner, or the perceptive force “ or effect of his truths and his doctrines”—a character which is by no means inconsistent with Mr. Pott’s more sustained compositions.

Such opportunities were not lost on Abernethy. He soon became possessed of what was known in the ordinary business of anatomy and surgery. His diligence too had afforded him an opportunity of testing those powers of communicating what he knew, to which I have just alluded. As an apprentice of a surgeon of Bartholomew’s, his views were directed to that hospital; and it was not long before the resignation of Mr. Pott, and the appointment of Sir Charles Blicke, who was assistant surgeon, to succeed him, opened to Abernethy an arena in which he might further mature his peculiar aptitude for *teaching* his profession. This had been, as we learn from his own testimony, an early object of his ambition, and one for which he had already begun to educate himself at the London Hospital.

CHAPTER V.

> "Terra salutiferas herbas eademque nocentes
> Nutrit, et urticæ proxima sæpe rosa est." *
>
> OVID.

A LARGE London Hospital is (if we may be excused the Hibernianism, as Mr. Abernethy used to call it) a large microcosm. There is little in human nature, of which an observant eye may not here find types or realities. Hopes and fears, joys and sorrows, solace and suffering, are here strangely intermingled. General benevolence, with special exceptions. There is no human good without its shadow of evil; even the benevolent must take care. Impatient sensibility is much nearer a heartless indifference than people generally imagine. The rose, Charity, must take care of the nettle, Temper. The man who is chary or chafed, in yielding that sympathy which philosophy and feeling require, must beware lest he degenerate into a brute.

One of the brightest points in Abernethy's character, was, that, however he might sometimes forget the courtesy due to his private patients, he was never unkind to those whom charity had confided to his care. One morning, leaving home for the hospital, when some one was desirous of detaining him, he said: "Private patients, if they do not like me, can go elsewhere; but "the poor devils in the hospital I am bound to take care of."

But to the hospital. Here we find some that have had the best this world can give—some who have known little but misery: the many no doubt lie between; but all come upon the same errand. Disease is a great leveller. There all flock, as to Ad-

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* "The same earth nourishes both wholesome and noxious plants, and the nettle is often next the rose."

dison's Mountain of Miseries, to get rid of their respective burthens, or to effect such exchanges as benevolence may have to offer, or the grave can alone supply. Our large hospitals have a most efficient "*matériel;*" the accommodations are extensive, the revenues princely. St. Bartholomew's, for example, has a revenue of between twenty and thirty thousand pounds a year, and is capable of receiving six hundred patients.

As regards what is mechanically or physically necessary to the comfort of the inmates, the ample appliances of our large hospitals leave little or nothing to be desired. There is every facility for the execution of the duties, that convenient space and orderly arrangement can suggest; in short, everything, in the general sense of the word, that money can procure. Then there are governors, whose hearts are as open as their purses, whose names are recorded in gold letters, as the more recent or current contributors to the funds of the establishment, and who rejoice in the occasional Saturnalia of venison and turtle; all duties or customs which may be observed, with the gratifying reflection that they are taking the thorns out of the feet of the afflicted; provided only that they do not involve forgetfulness of other duties, the neglect of which may plant a few in their own. The governors determine the election of the medical men, to whom the welfare of the patients and the interests of science are to be entrusted.

We have said that money cannot procure all things, and one of these is mind—a remark requiring some qualification certainly; but this we must refer to a subsequent chapter. Minds such as Abernethy's are not to be found every day; and, notwithstanding the sumptuous bill of fare we have already glanced at, there are many things in a large London Hospital yet to be desired—defects which, though it need no great penetration to discover, may, for aught we know, require public attention, a *Government altogether better informed* as to the actual defects in medical science, and the plastic hand of power, to supply.

Abernethy was elected assistant surgeon of St. Bartholomew's Hospital, July 15th, 1787. Sir Charles Blicke, an assistant surgeon, had been appointed to the surgeoncy vacant by the resignation of Mr. Pott, and Abernethy succeeded to the assistant surgeoncy thus vacated. The election was contested by two or three other candidates; amongst the rest, by Mr. Heaviside. This gentleman was an eminent surgeon, and a gentlemanly, facetious, and agreeable companion. He was originally in the Guards, and practised in London many years with great credit and respectability. He was fond of science, and expended considerable sums in the formation of an interesting museum. In the earlier part of his life, he gave conversaziones, which were attended by great numbers both of the scientific and fashionable.

He lived in a day when, if a gentleman felt himself insulted, he had at least the satisfaction of being relieved from his sensibility by having his brains blown out in a duel––professionally speaking, by a kind of "operative surgery;" viz. the demolition of the organ in which the troublesome faculty resided. Mr. Heaviside, in his professional capacity, is said to have attended more duels than any other surgeon of his time. This gentleman, albeit not unused to one kind of contest, retired from that at the hospital; which then lay between Mr. Jones and Mr. Abernethy—the former polling twenty-nine, the latter fifty-three votes.

This was an important epoch in the life of Abernethy. It is difficult to adjust the influence which it ultimately exerted, for good or evil, on his future prospects and happiness, or on his relations to science. The hospital had thus secured a man of extraordinary talent, it is true, and in spite of a system which indefinitely narrows the field of choice; but then the same "system" (which we shall by and by describe) kept Abernethy, as regards the hospital, for no less a term than twenty-eight years, in a position which, although it did not exclude him altogether from the field of observation it afforded, did much to restrict his cultivation of it. His talents for observation, nevertheless, and the estimation in which he was soon held, no doubt enabled him, to a certain extent, to bring many of his views to the test of practice. Still, as an assistant surgeon, except in the absence of his chief, he had officially nothing to do; whatever cases he conducted, were only by sufferance of his senior.

To a man of his ability, this was a false and miserably cramped position; one, in fact, much better calculated for detecting faults, than for developing the best mode of amending them. As assistant surgeon, he had no emolument from the hospital: he had, therefore, a very reasonable inducement to set about doing that for which he felt himself especially fitted, and to which he had early directed his attention—namely, to teach his profession. The event showed that he had by no means miscalculated his powers. These proved wellnigh unrivalled. The appointment to St. Bartholomew's, besides other advantages, gave him an opportunity of lecturing with the *prestige* usually afforded by connection with a large hospital. He did not, however, at first give his lectures at the hospital, but delivered them in Bartholomew Close.

There was at this time, in fact, no school, properly so called, at St. Bartholomew's. Mr. Pott had been accustomed to give about twenty-four lectures, which, as short practical discourses, were first-rate for that period; but there were no other lectures, not even on anatomy; which are essentially the basis of a medical school.

Dr. Marshall, who was a very remarkable man, and no less eminent for his general ability than for his professional acquirements, was at this time giving anatomical lectures, at his house, in Bartlett's Buildings, Holborn. In a biographical notice of him, in the "Gentleman's Magazine," in which we read that he was giving lectures about the year 1787, it is incidentally remarked, that "in all probability he derived little support from "St. Bartholomew's Hospital; for that recently an ingenious "young gentleman, Mr. Abernethy, had begun to give lectures "in the neighbourhood."

Abernethy, who seems to have been always seeking information, certainly attended some of Marshall's lectures; because he would occasionally refer to anecdotes he had heard there. He had thus listened to most of the best lecturers of his day—Sir William Blizard, Dr. Maclaurin, Mr. Pott, and Dr. Marshall. To the experience which he had thus acquired, and with the early intention of applying it, he added a remarkable natural capacity for communicating his ideas to others. We thus begin to perceive his *early cultivation* of that aptitude for lecturing which no doubt greatly contributed to the excellence which he ultimately achieved in that mode of instruction.

We desire to impress this feature in his education, because by and by it will, with other things, assist us in a rather difficult task : that is, an attempt to analyze the means by which he obtained such a power over his audience. He thus became a teacher at the age of twenty-three, at a large hospital where he was about to commence a school, of which he would be at first the sole support. This necessarily involved a fearful amount of labour, for an organization, active and energetic, but by no means of great physical power.

Labour, to be sure, is the stuff that life is made of ; but then, in a fine organization like Abernethy's, it should be directed with economy of power, and in application to the highest purposes. Such an organization should, if possible, have been relieved from the drudgery which lies within the sphere of more ordinary capacity. Ready as we are, then, to congratulate the young philosopher, about to display his powers on a field where he was so successful, still misgivings creep in which restrain, or at least moderate, our enthusiasm. Unusual ability, no doubt, allows men to anticipate the order which, as the rule, Nature seems to have assigned to the pursuits of intellect; but we must not suffer ourselves to be blinded to the rule, by the frequency of the exception. Youth is the time for *acquiring* knowledge; and, although there is no reason why the fruits may not be imparted to others as fast as they are gathered, still, when the larger space of a man's time at twenty-three is devoted to *teaching* merely, it may reasonably be doubted whether it be such a disposition of it as is best calculated to economise his power, or develop the maximum of its influence, in *extending* the science to which it is devoted.

John Hunter declined undertaking to teach anatomy at forty (1768), because it would have "*engaged his attention too much* " to admit of that general attention to his profession ; to forming " habits and established modes of thinking, which he thought " necessary." In Abernethy's after life, we think we saw a good deal of the wear and tear that early and diversified labour had impressed on his physical organization. In advancing life, the natural desire for ease, if not carefully guarded, may not be without its perils; but precocious labour, stinted rest, and the malaria of large cities, crowded hospitals, and filthy dissecting rooms, too certainly bring on a train of evils, not less grave because more distant.

We shall have to revert to these points when, in conclusion, we consider the variety and importance of his contributions to the science of his profession, and why they were not still more numerous. The latter, though perhaps the less grateful, is by no means the least useful portion of biographical analysis.

Commencing his lectures in Bartholomew Close, they soon seem to have attracted notice. The anatomical courses, which were always on a similar plan, were very skilfully framed to interest and instruct the students. The arrangement of the matter was such, that the dry details of anatomy were lighted up by a description, not only of the purposes served by the various parts, but by as much as could be conveniently included of the diseases or accidents to which they were subject; and thus the juxtaposition of the structure, function, and diseases, naturally tended to impress the whole.

Diseases of more general site, and which therefore did not fall conveniently under discussion in describing any one part, were reserved for a separate course of lectures. It was in this course that he more fully developed those general principles on which his reputation more especially rests. Of his inimitable manner we shall speak hereafter.

He was one of the first who insisted on the great importance of Comparative Anatomy, in studying the uses of the several parts of the human body. Were it not for the comparison of the relations of various parts in different animals, we should be continually the victims of hypotheses, which the juxta-position or other characters of organs in any *one* animal are constantly suggesting. Here necessity compels the observance of that rule of inductive philosophy, which seeks not for the true relation of any one thing in *itself*, but from *universals*, from uses and application which are common to *other* things. In one case nature makes that luminously clear, which is only dimly shadowed forth in another; and in seeing organs under every conceivable variety of circumstance, we learn to estimate at their full value characteristics which are common to and inseparable from all—the only point whence we can securely deduce their real uses in the animal economy. Of this, Abernethy early saw and inculcated the advantages.

As it was impossible to combine anything like a comprehensive study of a vast science in the same course with lectures on human Anatomy, he was accustomed, at the conclusion of the course, to devote a lecture or two to select illustrations of this important subject. This he ultimately relinquished, the universal admission of the fact rendering it no longer necessary.

We shall have occasion, by and by, to record the circumstances under which one of the most important steps was taken for securing the interests of Comparative Anatomy in this country —a proceeding in a great degree owing to the good sense and personal influence of Abernethy, and exemplifying, in the admirable fitness of the individual*, the penetrative perception of character which distinguished his early Preceptor in Anatomy.

We have little doubt that we have now entered on the most laborious part of Abernethy's life, and that, during this and some succeeding years, his exertions were so great and unremitting, as to have laid the foundation of those ailments which, at a comparatively early period of life, began to embitter its enjoyment, and to strew the onward path with the elements of decay and suffering.

He lectured himself on anatomy, physiology, and pathology, besides surgery—subjects which are now usually divided between three or four teachers. There is abundant evidence that he was an attentive observer of what was going on in the hospital. He was assiduous in visiting most places where any information was to be obtained. We find him attending Mr. Hunter's lectures, and constantly meditating on what he heard there; thus seeking opportunities of making himself more and more familiar with those opinions which, in his view, on most of the points to *which* they related, *were* definite—cautiously deduced—not always clear, perhaps; but, when understood, truthful.

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* Professor Owen.

He endeavoured further to mature an accurate perception of Mr. Hunter's views, by seeking private conferences with him; and Hunter kindly afforded him facilities for so doing. We have Abernethy's own acknowledgment of this, coupled with his regret that he could not more frequently avail himself of them. Indeed, when we consider that Abernethy lived at this time in St. Mary Axe, or in Mildred's Court in the Poultry,—that he was lecturing on the sciences I have mentioned,—that he was observant of cases at the hospital (a very timeful occupation),—and consider the distance between these points and Mr. Hunter's residence in Leicester Square, or his school in Windmill Street,—we see there could not be much time to spare. It was not, however, merely during the time at which he was delivering his lectures that he was thus actively employed. We have, not unfrequently, evidence that he was often at the hospital late in the day, in the most leisure season of the year, when perhaps his senior had, during his absence in the summer, confided the patients to his care.

We used to get, occasionally, such passages as these in the lectures: "One summer evening, as I was crossing the Square of the hospital, a student came running to me," &c. Very significant of continued attention during the summer or leisure season—he not being, be it remembered, other than an assistant-surgeon, and not, therefore, necessarily having duties at the hospital.

At this period, it was a common practice with him to rise as early as four in the morning. He would sometimes go away into the country, that he might read, more free from interruption. He also instituted various experiments, some of which we shall have shortly to notice, for the philosophical spirit in which they were conducted. His visit to France must have been made about this time, when the celebrated Desault was at the height of his reputation. His stay could not have been long, in all probability; but we have evidence showing how quickly he perceived, amidst the success of Desault, the more important defects of the hospital—the Hôtel Dieu—to which he was *chirurgien-en-chef*, and the influence exerted by them on his practice.

As we shall be obliged again to mention Desault in connection with a material item in the catalogue of our obligations to Abernethy, we postpone for the present any further remarks on that distinguished French surgeon.

Abernethy now continued actively engaged in the study and teaching of his profession. The most remarkable circumstance at this time of his life, and for several years, was his peculiar diffidence—an unconquerable shyness, a difficulty in commanding at pleasure that self-possession which was necessary to open his lecture. Everything connected with his lectures is of importance to those who may be engaged in this mode of teaching, or who may desire to excel in it. No man ever attained to excellence more varied or attractive; yet many years elapsed before he had overcome the difficulty to which I have alluded.

An old student, who attended his lectures, not earlier than 1795, told me that he recollected several occasions on which, before beginning the lecture, he had left the theatre for a time, to collect himself sufficiently to begin his discourse. On these occasions, a tumult of applause seemed only to increase the difficulty. The lecture once commenced, I have no evidence of his having exhibited further embarrassment. He seems early to have attained that happy manner which, though no doubt greatly aided by his peculiar and in some sense dramatic talent, there is every reason to believe had been carefully cultivated by study and observation.

His lectures continuing to attract a larger and larger class, the accommodation became inadequate for the increased number of students. The governors of St. Bartholomew's, therefore, in 1790, determined on building a regular theatre within the hospital. It was completed in 1791, and Abernethy gave his October courses of anatomy, physiology, and surgery of that year in the new theatre. He had thus become the founder of the School of St. Bartholomew's, which, for the approaches it made towards giving a more scientific phase to the practice of Surgery, was certainly superior to any other.

In expressing this opinion, we except, of course, John Hunter's lectures, for the short time that they were contemporaneous with those of Mr. Abernethy; John Hunter dying, as we have said, in 1793. As St. Bartholomew's Hospital was our own Alma Mater, we may, perhaps, speak with a fallible partiality; but we think not. We are far from being blind to the faults which Bartholomew's has, in common with other schools; and, we believe, regret as much as anybody can do, that the arrangements of our hospitals, excellent as in many respects they are, should still so defectively supply many of the requisitions which the interests of science demand. Some of these defects we may endeavour to point out in their proper place. We shall now leave the subject of Mr. Abernethy and his lectures, and begin to consider some of his earlier efforts at authorship, sketch the objects he had in view, and the mode of investigation.

CHAPTER VI.

"All things are but altered, nothing dies,
And here or there the unbodied spirit flies."
DRYDEN.

THE most universal character impressed on all created things that sense allows us to recognize, or philosophical inquiry to demonstrate, is "change."

While nothing is more certain, few things pass less observed; or, when first announced, more stagger conviction.

An old man sees the yew-tree of his boyish days apparently the same. Gilpin tells us "eight hundred years is no great age for an oak* !"

The cliff which we left "beetling" seems to beetle still; mountains appear to be everlasting; yet, were seas and rivers to disclose even a small part of their mission, the Danube or the Volga might tell of millions of tons of soil carried from higher levels to the Black Sea and the Caspian. Animals, too, are mighty agents in recording the mutability of the matter of the universe. Coral Reefs, never spoken of in smaller terms than miles and fathoms, are the vast ocean structures of countless millions of animalcules, which serve, as it were, to link together the two great kingdoms of organic nature—the animal and vegetable creation. The microscopic geologist informs us of whole strata, wellnigh entirely composed of the silicified skeletons of insects. Sir Charles Lyell further impresses on us the reality of continual change, by referring (and, as it would appear, with increasing probability) even the stupendous changes demonstrated by geology to the agency of causes still in operation.

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* "Forest Scenery."

Animals, however, besides the curious structures which they combine to contribute, are individually undergoing constant change. Man is not only no exception, but he is a "glaring" example.

The whole human race are in hourly progress of mutation. "In the midst of life we are in death," is a truth to which physiology yields its tribute of illustration. Every moment we are having the old particles of our bodies silently taken away, and new materials as silently laid down. Surrounding influences, as air, moisture, temperature, &c. which, during life, are necessary to existence—the moment the breath leaves us, proceed to resolve the body into the elements of which it was composed. In all cases, change may be regarded as the combined result of two forces: the force acting, and the body acted on—that is to say, of certain external agents and certain forces inherent in the thing changed.

Animals are no exceptions to this view, and diseases are amongst a multitude of other exemplifications of it; but, in order to distinguish these more clearly, it is desirable that we should be familiar with those more ordinary changes in the body which are constantly going on; and to some of these were Abernethy's early investigations directed.

In proceeding to give some account of his works, we must be necessarily more brief than a scientific analysis would require.

To do him full justice, it would be necessary to republish his writings, with appropriate commentaries. We shall hope, however, to do enough to relieve his memory from some of the numerous misconceptions of his principles and opinions; and to endeavour to show his claims to the respect and gratitude of posterity.

In everything Abernethy did, we find evidence of the acuteness of his mind, and his general qualifications for philosophical research.

His lectures had gradually attracted an increasing number of students; and he seems, about 1791, to have been desirous of prefacing his lectures on Anatomy by discussing the general composition of Animal Matter.

The rapid advance of chemistry had given a great impetus to this kind of investigation. Abernethy was not only well up in the chemistry of the day, but also not unskilled in the manipulatory application of it; and he felt interested in observing the great diversity of substances which appeared to be made up of similar elements. Boyle has recorded a vast number of facts, many of which would even now well repay a thoughtful revision; and Fordyce was certainly one of our most philosophical physicians.

Boyle had grown vegetables in water and air only, and found they produced woody fibre. Fordyce found that gold fish, placed under similar conditions, not only lived, but *grew*. Abernethy's experiments had for their object to inquire how far organized bodies (animals and vegetables) were capable of deriving their various structures from similar simple elements.

He grew vegetables on flannel, wetted from time to time with distilled water; and then, analyzing them, compared the results with those of the analysis of vegetables grown in the ordinary manner.

Other curious experiments consisted in pouring concentrated acids on vegetable structures, with a view to dissolve any alkali or iron which they might contain, and then analyzing the vegetables so treated.

He now found, in the burnt vegetable, lime, iron, &c. which, had they been free to combine, should have been taken up by the acid to which he had subjected the vegetable before he analyzed it; but he found neither in the *acid*, whilst both were discovered in the *vegetables*.

He also inquired whether tadpoles and leeches would live when kept only in distilled water, with the admission of air. For example, he placed twelve leeches in two gallons of distilled water. They weighed, in all, twelve scruples. In three months, two had died, but the remaining ten weighed twelve scruples, showing that they had *grown*. He next inquired whether vegetables, grown in air and distilled water, would admit of further conversion into the structure of animals; and, for this purpose, he fed rabbits on vegetables so reared. His rabbits appear to have eaten about six plates at a meal of young cabbages thus reared on flannel wetted with distilled water.

He also experimented on eggs, both before and at the time of incubation.

He wished to ascertain the quantity of lime in the chicken and the egg, respectively; and whether any of the lime was absorbed from the shell, which it appeared not to be.

It is curious to observe the time and labour he gave to these experiments; they evince a very perfect knowledge of the chemistry necessary; whilst the circumstances calculated to interfere with or obscure the conclusions from them are judiciously and clearly stated.

Many of his remarks, as well as the ingenious suggestions with which they are interspersed, exemplify the caution with which he reasoned. In speaking of his experiments on leeches and tadpoles, many of which latter had become perfectly developed frogs, he says: "The experiments which I made on this "plan (in vessels of distilled water, covered with linen) were "made in the summer, when to prevent vegetation was im-"possible; and, on the other hand, when the vessels were covered "over, even leeches died. In the winter, vegetation might cease; "but then the torpid state of the animals would render the "experiments inconclusive."

He reduced an equal number of eggs and chickens (at the time of incubation) to ashes; sometimes in crucibles, sometimes in retorts. On the ashes he poured some distilled water, and ascertained the salts (as lime, &c.) contained in them. In some experiments, the quantity of these found in the ashes of the chickens greatly exceeded that found in the ashes of the eggs. In other experiments, the quantities were equal.

In some of his experiments, after using the best chemical tests for detecting iron, lime, and the salts, and then washing the residue with distilled water, he burnt it in a crucible, and found more lime and iron; on which he makes the following remarks, which suggest what we apprehend, even at this time, is a very necessary caution:

"This circumstance proves to me that the substances found "in the ashes of burnt animal matter do not formally exist in the "mass before its destruction, but are only new distributions of "the same ultimate particles which, under their former mode of "arrangement, made the animal substance; but which, being "driven asunder by the repulsive power of fire, are left at "liberty to form other modifications of matter." Page 97. Just what happens when animal matter is burned, in the formation of ammonia, by the union of the nitrogen and hydrogen then set free.

He investigated, also, the question of how far the results of the decomposition of animal matter would be identical, if the analyses were conducted by heat, or by putrefactive decomposition. In this experiment, he selected blood; and he found that blood which had been allowed to putrify yielded *a much larger quantity* of iron and lime.

The whole of the experiments are very suggestive, and full of thought; and not only indicate very forward views of the elementary constitution of organic and inorganic matter, but also moot questions which have not lost any of their interest by the most recent investigations. He concludes by observing that he had undertaken these experiments for the reasons already assigned, and because he had imbibed the idea that the *ultimate particles of matter were the same.*

He remarks that the progress of chemistry had not been applied, in every respect, to the best purpose; that men's views were becoming *contracted* by being directed to *individual* objects; and that they had ceased to contemplate the beautiful and extensive subject of matter and its combinations; and he complains that even Fourcroi, Lavoisier, and Chaptal, either avoid the subject, or do not sufficiently consider it. We must recollect this was said before Sir H. Davy had made his splendid discoveries. Abernethy, after observing that he hopes his experiments will induce others to investigate the subject, concludes thus:

"I know not any thought that, on contemplation, can so "delight the mind with admiration of the simplicity and power

" evident in the operations of the Creator, as the consideration " that, by different arrangement and motion of singular atoms, " He has produced that variety of substances found in the world, " and which are so conducive to the wants and gratification of " the creatures who inhabit it."

DISSECTION OF A WHALE.

SECTION I.

> " Mors sola fatetur
> Quantula sint hominum corpuscula."
> Juv.

Amongst a multitude of examples, which teach us how little we can infer the importance of anything in nature from its size, or other impressions which it may convey to mere sense, we might adduce the wonderful little tubes, certain relations of which were the objects of this paper. Those constant mutations in animal bodies which are every moment in progress, are, in great part, due to a very curious order of vessels, of such extreme minuteness and tenuity, that, being in the dead animal usually empty and transparent, they are very commonly invisible, and thus long eluded discovery. There is one situation, however, in which circumstances combine to expose them to observation. Transparent though they be, they are here usually rendered visible; first, by being loaded with a milk-like fluid; and secondly, by being placed between the folds of a membrane, itself beautifully transparent (the mesentery). This fluid they have just taken up from the digestive surfaces on which their mouths open, and they are now carrying it off to pour it into the blood-vessels, that it may be added to the general stock of the circulation.

In the situation above mentioned they were at length discovered, about the commencement of the 17th century. Every thing destined to support the body with new material, as well as the old, which is to be taken away, must first be sucked up by the myriads of inconceivably minute mouths of these vessels, which, from their office, are called the *absorbents*. These absorbents may therefore be regarded as the sentinels of the body. They are very sensitive and excitable; but, besides this, there are placed in the course of their journey, from the surfaces whence they bring their contents, and the blood-vessels to which they are carrying them, a number of *douaniers*, or custom-house officers (the glands, or kernels, as they are popularly called), whereby, as we have every reason to believe, the fluids they are importing are subjected to rigid examination; and, if found to be injurious, to some modification, tending to render them more fit for admission into the system.

If the contents are very irritating, these vigilant guards—these kernels—become very painfully affected, and sometimes inflammation is set up, sufficient even to destroy the part; as if, faithful to their trust, they perished themselves, rather than give entrance to anything injurious to the body.

We should never advance, however, in our story, if we were to tell all the interesting peculiarities of these curious vessels.

When first discovered, and the office assigned to them could no longer be disputed, the general distribution of them was still doubted. As it was usual to render them visible by filling them with quicksilver, so, with a kind of reasoning which has too often characterized mere anatomical research, when they could not be made visible, it became the fashion to doubt their existence. Amongst other structures, Bone was formerly one in regard to which people found a difficulty. How could such delicate vessels exist in such an apparently dense structure? But Mr. Abernethy, who, like Bacon, had always opposed mere eye-reasoning, used to observe, with equal simplicity and good sense, that, for his part, he could see no more difficulty in an absorbent taking up a particle of bone, than he could in comprehending how a vessel could lay it down, which nobody doubted. We now know that bone is not only supplied with all the vessels which characterize a living structure, but so liberally, that, in comparison with some other structures of the body, we regard it as a part of high organization.

Nevertheless, the extreme minuteness and transparency of these absorbent vessels naturally led persons to regard with considerable interest any magnified view of them, such as that afforded by larger animals. In the paper before us, which was published in the "Philosophical Transactions" for 1793, Mr. Abernethy gives the account of his examination of the absorbents in a whale; and his object was to help to determine a question long agitated, whether the glands or kernels were composed of cells, or whether they were merely multiplied convolutions of vessels. He selected the absorbents from the situation to which I have already referred. He threw into the arteries which carry blood to nourish the gland, a red solution containing wax, which of course became solid on cooling; and into the veins which return the blood from all parts, a similar solution, only coloured yellow. He filled the absorbents with quicksilver.

He found, in filling the absorbents, that wherever the quicksilver arrived at a gland, there was a hesitation—its course became retarded, and that this retardation was longest at those glands which were *nearest the source* whence the vessels had drawn their contents, viz. the alimentary canal: as if the surfaces over which the fluid had to pass were more multiplied where most *necessary*, or, recurring to our metaphor, as if the more strict *douanier* had been placed on the frontier. He says that he found that some of the absorbents went *over* the glands, whilst others *penetrated* these bodies. That he found that the melted wax which he had thrown into the vessels had formed round nodules of various sizes. He then extended his examination of these vessels to those of horses and other large animals; and the result of his investigation was, that it inclined him to the conclusion that the glands were *not merely* made up of convolutions of vessels, but were of *a really cellular structure.*

The paper is very modestly put forth, and he concludes it by observing that he offers it merely for the facts which it contains, and not as justifying any *final* conclusion; but "as all our "knowledge of the absorbents," he continues, "seems to have "been acquired by fragments, I am anxious to add my mite to "our general stock of information on the subject."

It may not be uninteresting to some unprofessional readers to know that the glands here alluded to are the organs which are so seriously diseased in those lamentable conditions popularly expressed, I believe, by the term mesenteric disease, or disease of the mesentery.

SECTION II.

CURIOUS CASES PUBLISHED IN THE "PHILOSOPHICAL TRANSACTIONS," 1793.

> "The Universal Cause
> "Acts to one end, but acts by various laws."
>
> POPE.

However paradoxical it may appear, it is not the less true, that nothing more teachingly impresses the inquirer into nature with the *actual* presence of general laws than the *apparent* exceptions to them. Finite capacities in dealing with the Infinite must of course encounter multitudes of facts, the meaning of which they cannot interpret—portions of the Divine Government, as Butler has said, which they do not as yet understand.

In philosophical investigations, these are properly regarded as facts which, in the present state of knowledge, cannot be made to fall under any of our very limited generalizations.

At one period, departures from the ordinary structure or form in animals were simply regarded as unintelligible abstractions, and no more philosophical expression was given to them than "Lusus Naturæ"—sports of Nature. Progressive science, however, has thrown considerable light on such phenomena, and invested many of them with a new interest.

Physiologists have not arrived at the explanation of all such facts; but much has been done by comparative anatomy to show that many of them are merely arrests of development, and cases of interference with the ordinary law.

That, in fact, they show the mutual harmony and connection of the laws of nature to be such, that the development of any one law implies the concurrence, so to speak, of some other, just as the successful incubation of an egg, or any other familiar fact, implies the presence of certain conditions. We cannot boil a drop of water without the concurrence of various laws: we say it boils ordinarily at 212° of Fahrenheit; but how many conditions this involves!

Until understood, how few could have guessed that mechanical pressure could have so modified the degree of heat necessary, as to exalt it to more than double, or reduce it to less than half; and again, how few would have looked for the force which, under common circumstances, governed the point at which water was thus converted into steam, in the pressure of the atmosphere; yet so mutually influential are these conditions—namely, heat and a certain pressure in modifying this change of form or matter —that some of Faraday's most interesting results in experimental chemistry (we allude to his reducing several gaseous bodies to the liquid form) were obtained by *abstracting* heat and increasing pressure.

It is of very great consequence to remember these interferences in relation to disease, because most diseases may be regarded as examples of them. Considered as "abstract wholes," as entities—diseases are necessarily unintelligible: but when looked at as natural processes obscured by interferences (if the inquiry be conducted with strict observance of those principles which are essential in all philosophical researches), they either at once become intelligible, or, at least, as open to investigation as any other facts in natural philosophy.

When we investigate the laws of nature with a view to the development of the sublime objects of natural theology, the concurrence of the various conditions, necessary to the most ordinary phenomemon, inclose the most irresistible proofs, from natural evidence, of the Unity of the Creator.

Regarded in the light of facts which we as yet may not be able to generalise, the cases here recorded by Abernethy are very interesting; although it is to be regretted that both cases were bodies brought in for dissection, in times when the circumstances baffled, if they did not forbid, any inquiry into the histories of them. It is lamentable to think of the state of the law with respect to Anatomy at that time.

Any surgeon who was convicted of *mala praxis,* resulting from ignorance of Anatomy, was severely fined, perhaps ruined; and yet so entirely unprovided were the profession with any *legitimate* means of studying Anatomy, that they could only be obtained by a connivance at practices the most demoralizing and revolting.

Bodies were, in fact, chiefly obtained by the nightly maraudings of a set of men, who, uninfluenced alike by the repulsions of instinct or the terrors of law, made their living by the plunder of grave-yards.

Many a tale of horror, no doubt, might be told on this subject.

Graves were very commonly watched; and severe nocturnal conflicts occurred, which were conducted in a deadly spirit, not difficult to imagine. We believe all this has passed away; there is no necessity now for such revolting horrors. The public began to *think* for themselves, the *real remedy* for abuses. But to our cases. Both were curious; the one was the body of a boy, who did not appear to have been imperfectly nourished, but in whom the alimentary canal was found to be less than one-fourth of its natural length, and in which also the relative length of its two grand divisions was reversed. The smaller in diameter, usually very much the longer, was so unnaturally short, as not to exceed in length more than one half of the more capacious but normally shorter division of the canal.

The other case presented a no less curious departure from the ordinary arrangement of parts than a reversed position of the heart; which, instead of being placed with its point as usual on the left side, was found to have that part situated on the right. In the natural condition of things, there is a difference on the two sides of the body, in the manner in which the large vessels are given off to supply the head and upper extremities. These differences existed, but were reversed; the arrangement of vessels ordinarily found on the right, being here on the left side, and *vice versâ*.

In all this, there would be nothing to prevent the heart from pumping the blood to all parts in the natural way. But another very singular arrangement was found in relation to the liver. To the unprofessional reader we should observe, that usually, whilst all other things are made, or secreted as we term it, from the purer or arterial blood; in the *human body*, the Bile is secreted from a vein which enters the liver for that purpose.

Now, in the case before us, this great vein never entered the liver at all; so that here the bile was separated, like other animal fluids, by the arteries. The arteries going to the liver were found much larger than usual.

Mr. Abernethy examined the bile by submitting it to various tests; and comparing the results with those obtained from ordinary bile, he found them to be the same. His remarks are, as usual, ingenious and to the point, and very characteristic of the penetrative perception with which he seized on the proximate and practical relations of facts. "When we see the unusual circum-"stance," says he, "of secretion taking place from a *vein**, we "are apt to conclude that the properties of such a secretion re-"quire that it should be made from venous blood. But, in this "case, we see that bile could be prepared from *arterial* blood; "and we are led, therefore, so far to modify our conclusion as to "infer, not that venous blood is *necessary*, but that it can be "made to answer the purpose."

We must not omit that these remarks are supported by comparative anatomy. As we descend in the scale of creation from the more complicated organizations to those which are more simple in their structure or their relations, the arrangement which I have stated as usual in man no longer obtains, but the bile is secreted from the arteries as the other fluids of the animal—showing, in fact, that the inference drawn by Abernethy was the legitimate conclusion.

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* The ordinary plan in respect to bile in the *human* body.

Since the discovery of this case, one or two others have been observed; and the opinions of several eminent men, in relation to the bearing such cases have on the ordinary sources of bile, are described in Mr. Kiernan's interesting paper on the Anatomy and Physiology of the Liver, in the "Philosophical Transactions." It is very interesting, particularly to a professional reader, to peruse that discussion, in order to estimate Mr. Abernethy's comparatively simple, ready, and, as it would seem, correct view of the subject.

One other thing we learn from these cases—the extreme importance of examining bodies whilst their histories and symptoms can be recorded. It might have been highly useful to science, had the histories of these cases been known; and the circumstance should be mentioned, as, in some measure, tending to counterbalance in the public that not unnatural but (as regards their real interest) not less to be lamented aversion to the inspection of the dead—a branch only, it is true, but a very important one of physiological inquiry. It is the only means of which we can have the comfort of knowing that, however unable we may have been to arrest disease, we were at least right in the seat we had assigned to it; but it is infinitely more valuable in disclosing to us affections of organs which *had given no sign*, and in thus impressing on us the necessity of taking a wider range in our investigations, and comprehending in them all *those injurious influences* which have, *at various periods*, acted on the body; for we *thus* obtain an insight into the nature of disease which *no mere present symptoms* can ever afford us.

The repulsions which the public have to overcome are admitted; but let us not, in common justice, forget those sacrifices of time, labour, and too often of health also, which are made by the profession. Nor is it immaterial to mention that it is a service for which they seldom receive any remuneration, the only incentive being one which, if it excite no sympathy, is at least entitled to respect—namely, the desire to improve their knowledge of their profession. There is no doubt of the deep and common interest which the public and the profession have in this question; and it is from that conviction that I have ventured on these few remarks. Abernethy, when he introduced any subject in his lectures, was accustomed to say at once all that he intended to remark on it. I beg, in the foregoing observations, to follow his example, which I trust the reader will accept as an apology for the digression.

CHAPTER VII.

"L'art (de délicatesse) consiste à ne pas tout dire sur certains sujets, à glisser dessus plutôt que d'y appuyer ; en un mot, à en laisser penser aux autres plutôt que l'on n'en dit."—Bouhours.

One of the most beautiful poems in the English language, perhaps, is Armstrong's "Art of Health." Whether it be that the title is uninviting, or from some other cause, I know not, but it is very little read; yet scarcely any one who has read it, has done so without pleasure. Besides containing many admirable and valuable instructions, it shows how an ordinary, and to many even a repulsive, subject can be treated with such discretion, taste, and even elegance, as to render it pleasing and attractive.

Such a writer could have conveyed, even in prose, explanations of disease so as to interest and instruct his readers. With no such power, we are almost inclined to regret the impossibility of doing Abernethy justice, without saying something of nearly all his works. If, however, in so doing, we make one more step towards familiarizing the public with matters which affect their best interests, we shall not regret any labour which this, the most difficult part of our task, may have required.

We so usually connect pain with disease, that, in our haste, we are apt to imagine that it is not merely the worst feature, but the only sign of it. "I am very well, I am in no pain whatever," is a common expression, and yet a person may be irremediably stricken, without suffering any pain. Pain is, in fact, often the best possible monitor, and has saved many thousands of lives by the necessity it has imposed of observing what is the best of all remedies, in a large class of cases. Amongst hundreds of examples, we might cite several affections of joints, wherein pain alone has sometimes exacted the observance of that which surgeons were a long time before they had learned the full advantage of; and which, when they had been taught it by Abernethy, they have often failed, with all their endeavours, to accomplish, but which, when efficiently secured, is of more consequence than any one other remedy; we mean "*absolute repose.*" There are plenty of diseases marked by little or no pain, or which, at all events, are not painful; but they are amongst the most fatal and insidious of human maladies. Let us commence the record of some of the numerous improvements we owe to the genius of Abernethy, by mentioning one of them.

We have, too many of us probably, observed something like the following, on the assembling of a family of a morning: the usual greetings interchanged, and that cheerful meal, breakfast, fairly begun, our attention has been directed to some fine, comely, perhaps beautiful girl, who, to the hilarious spirits of her laughing sisters, has only contributed a somewhat languid smile. We may, perhaps, have remarked that she is a little more spoken to by her mother than any other of the family circle; we may, too, have observed a tone compounded of confidence and gentleness, somewhat different from that addressed to her sisters. Still, though less hilarious than the rest, she has chatted away with considerable cheerfulness; she has, however, a languor in her manner, which but for the surrounding contrast, might not have occurred to us. On rising from the breakfast-table, we observe that her gait is peculiar. She is not exactly lame; but her step has something between firmness and faltering, that seems to indicate more effort or less power.

Poor girl! she is about to have, if she have it not already, a stealthy and hitherto almost painless disease; stealthy, because it is so far a comparatively painless malady. Deep in the loins there has been the smouldering fire of disease, which is to result in what is called "Lumbar abscess." This grievous malady, which in *many instances* begins not less insidiously than I have mentioned, is found on inquiry not to have been *wholly* without some of those premonitory signs which, in obedience to the beneficent laws of the animal economy, almost invariably precede even the most insidious malady. Inquiry generally elicits that, however little complained of, there has been at times more or less of uneasiness, if not pain, felt in the loins; that it has not been so much lately; but that it has become less in force or frequency, since the appearance of some swelling, which may be in the loins, or some other part, lower or more or less distant.

It is a malady very commonly connected with diseased spine, but frequently without any such complication; and it is curious that Mr. Abernethy at first met with as many as, I think, eight cases in succession, which were not complicated with any disease of the spine. Under any circumstances, it is a serious malady, and usually, when the collection bursts, or is opened, severe constitutional symptoms supervene, which, though not without exceptions, gradually usher in what Armstrong calls

> "The slow minings of the hectic fire,"

and destroy the patient.

Now, Mr. Abernethy's plan was intended to prevent this last and dreaded issue. The chief points of excellence in his recommendations are—

First, the emphatic recognition of the constitutional origin and nature of the malady;

Secondly, the consequent necessity of a greater attention to the general health of the patient;

And lastly, if it could not be dispersed, to relieve the interior of its contents, so that its extensive surface should never be exposed.

The mode of proceeding was extremely simple, and there is no doubt that a great many lives have been saved by the practice thus recommended. I have heard, however, that some surgeons think the merits of the plan overrated, which I can only suppose explicable on the ground that it has been imperfectly followed out; and I am the more disposed to this view, because nothing can be more *entirely opposed* to Mr. Abernethy's principles and intentions, than the treatment of many cases *said to have been treated* after Mr. Abernethy's plan.

As a considerable number of families have really a painful interest in this question, I will, at the risk of being a little professional, state what has occurred under my own observation, in explanation of the apparent discrepancy. My own experience obliges me to coincide with those authorities on this subject, who, approving Mr. Abernethy's practice, adopted it. Amongst a host of eminent men, I will mention only two, Sir Astley Cooper, and a scarcely less eminent authority, Mr. Samuel Cooper, the laborious and distinguished author of the "Surgical Dictionary," who observes that Mr. Abernethy's plan deserves "infinite praise." Sir Astley Cooper, too, in speaking of a very dangerous period of the case to which Mr. Abernethy's plan has an important relation, says: "We should adopt the plan suggested by Mr. Abernethy, "as it is the best ever invented by any surgeon." The apparent discrepancy in the results of the experience of different surgeons, is rather a matter of degree, and admits of easy explanation.

The feature whence the disease derives its name is merely a partial exposition of an exceedingly deranged state of the whole economy, not unfrequently complicated with organic disease. Although Mr. Abernethy's paper shows that even these cases are not necessarily fatal, still, in general, such will sooner or later terminate unfavourably under any treatment; but, in many others, the explanation which I first suggested has been a satisfactory solution of the failure: viz. that the principle on which Abernethy proceeded has not been seized, and that therefore the treatment has involved direct violations of it. In some, the local relief has been by no means conducted with the observance of those conditions which Mr. Abernethy has enjoined. In others, there has not been even any reasonable approximation to that careful attention to the general health which is the necessary basis of the plan.

Another point, which has in some cases impeded the adoption of the practice, is the increased responsibility it seems to involve. If a surgeon is to be mistrusted and charged with either, the "laisser mourir" is much less injurious to him than the "tuer." What we mean is this: Everything sometimes is going on well, until the opening of the deposited fluid. If it be left to open by the ordinary processes of nature, the subsequent symptoms are properly enough ascribed to the usual course of the disease; but if the surgeon has interfered, and, from any circumstances whatever, the opening does not heal, or bursts soon after from some slight accident (which has now and then happened), the surgeon is blamed. The only remedy for this, is to impress the necessary caution: repose of the part, and so forth.

There is, however, a third point, of great practical consequence, on which Mr. Abernethy has been misunderstood. I allude to the local condition under which the puncture should be made. When, notwithstanding our persevering observance of all measures calculated to repress the diseased actions, or to procure the absorption of the deposited fluid, we perceive it to be increasing or approaching the surface, *then, before any inflammation* of the skin has taken place, it should be discharged.

In many cases, *this* opening has been delayed until the skin *has become inflamed,* or much attenuated. Now this risks the accomplishment of an object which it is a material point with Mr. Abernethy to secure—namely, the *immediate healing* of the puncture.

On this point, even so good an authority as Sir Astley Cooper has given a misdirection. " Let the abscess proceed," says Sir " Astley, until you observe a blush or redness on the skin, and " then adopt Mr. Abernethy's plan." Now this direction does not absolutely prohibit the opening of the cyst with the object which Mr. Abernethy had in view; but, as before stated, it deprives us of *one most desirable condition.* To settle this point, we quote Mr. Abernethy's own words. In discussing the point of time at which the opening should be made, he asks: " Are we " to wait until evident *signs of inflammation* appear? I think " not." Accordingly, in a case where the surface had become red, we find he took care to *avoid* opening it *at that part;* because it risked the security of at once healing the puncture.

The truth is, that the *whole* of the plan is most valuable; but it must be carefully followed *in its integrity;* and that this may be done, the principles on which it is founded must be constantly kept in mind. These are—the improvement of the general health, with the view of arresting the action of disease, and producing the absorption of the morbid secretion. This failing, to puncture the abscess, so as to secure the discharge of its contents without the admission of air, and on conditions calculated to *ensure* the immediate healing of the wound; then to favour the approximation of the sides of the cavity, by relieving it of its contents, by puncturing it anew, *before* it shall have become so much distended.

Another misapprehension has arisen with regard to Mr. Abernethy's object in excluding air; and unnecessary pains have been taken to show that the presence of air is not injurious to living surfaces. It was not from any apprehension of this kind that he was anxious to exclude the air; but from the tendency that the *presence of air* had to favour the *putrefactive decomposition* of the new secretion. We must not omit to mention the origin of this instructive paper, as it is highly characteristic of Abernethy's acuteness of observation, and his promptitude in the practical application of it.

A lumbar abscess had been opened by caustic, and when the eschar had nearly separated, the cyst was partly emptied; the sides of the cavity collapsing on the imperfectly separated eschar, the opening was closed, and *none of the usual constitutional disturbance followed.* When, however, the eschar, finally separating, exposed the cyst,—within twelve hours, the usual dreaded disturbance of the system supervened. Abernethy took the hint thus disclosed to him, and produced the improvement, of the merits of which we have endeavoured to give a brief representation.

CHAPTER VIII.

HIS ESSAY ON THE SKIN AND LUNGS.

"It is madness and a contradiction to expect that things which were never yet performed should be effected, except by means hitherto untried."—BACON, NOV. ORG. APH. 6.

WHEN we consider the object which the distinguished Author had in view, in the immortal Work whence we have taken the foregoing simple but instructive aphorism, we cannot but perceive how highly suggestive it is to those engaged in scientific researches, or how necessary to be borne in mind by those who are really aware of the present state of Medicine and Surgery, and desirous of seeing them become a definite science. Nor does it appear inappropriate to the consideration of Abernethy's experimental inquiries into the functions of the skin and lungs. An *extended* investigation—of which his paper on these subjects contains an excellent type, and is in part a practical application—would be a great step towards the creation of a real science, and would certainly fall within the "means untried" of Lord Bacon.

Although the latter part of the last century, and the first half of the present, have been very remarkable for the number of distinguished men who have flourished during that period, in almost every branch of knowledge; yet neither the bar nor the senate, neither literature nor any of the sciences, can boast of greater men, nor lay claim to more positive improvement, than Chemistry.

If we only consider that interval between the discovery of oxygen by Priestley, in 1774, and the conclusion of Sir Humphrey Davy's labours, Chemistry almost seems like a new science; and it continues to advance with such rapidity, and is daily opening out so many new questions, that the most accomplished chemist of one year is never sure how much he may have to learn the next; nor, unless he reasons with great caution, how much he may have to *un*learn.

To a physiologist, who requires assistance *from all branches of science,* Chemistry must always be an interesting study. When we lay aside all speculations as to what is the abstract nature of Life, and study that which is the proper object of philosophy—that to which it seems the faculties of man are limited—namely, the *laws* in obedience to which the phenomena in nature occur; and apply the knowledge thus obtained to the occurrences which take place in the human body; we soon discover that, whatever the abstraction "Life" may be, we live proximately, in virtue of certain changes in various forms of matter; as food, air, the various constituents of our bodies, &c.; and that these consist of multiplied separations and rearrangements of their respective elements, which it is the special province of Chemistry to examine.

If we investigate the changes of the living, or the structure of the dead, with these objects,—we shall be in no danger of perverting Chemistry to purposes to which it is inapplicable. When, however, we proceed a step further, and seek to give a *chemical expression* to various uses and relations of different parts of the body, the greatest caution is required.

In the first place, in a machinery which is a practical application of a great *many* sciences, it is to the last degree improbable that they can be expressed by any *one.*

Again, to estimate the true meaning—the physiological interpretation of many changes which might be in their proximate sense chemical,—a greater familiarity with the phenomena of *disease* is necessary than *usually* falls within the inquiries of *the most scientific chemist.*

To a person acquainted only with the ordinary phenomena of health, or who is not even something also of a philosophical pathologist, Chemistry is for ever suggesting tempting analogies, which are constantly tending to mislead him to conclusions on insufficient data; and to examine and rest too much on the *chemical* facts deducible from one or other function, without sufficiently attending to the *physiological* relations of that function with *all* others.

In fact, for want of due caution, or it may be of a sufficient range of information, the assistance which Chemistry has hitherto rendered to Physiology has been attended with so many assumptions, that it is extremely difficult to say on which side the balance lies—of advantage or error. We are aware that at this moment there is a contrary feeling—a kind of *furore* for *chemical* solutions of *physiological* phenomena. We believe the caution we venture on suggesting was never more necessary.

The discovery of oxygen gas by Priestley, not only gave a great impetus to chemical inquiries, but affected Physiology in a very remarkable manner; when it was found that the *more obvious* phenomena of all cases of ordinary burning—lamps, candles, and fires of every kind—consisted mainly of the chemical union of charcoal and oxygen (carbonic acid); and again, when it was discovered that animals, in breathing, somehow or other produced a similar change, one may conceive how ready every one was to cry, "I have found it. The heat of animals is nothing more than "combustion! We inhale oxygen; we breathe out carbonic acid; "the thing is plain. This is *the* cause of animal heat!"

It has always struck us as a curious thing that *chemists* should have attached such a dominant influence, in the production of heat in animals, to the union of carbon and oxygen; because nobody is necessarily so familiar as they are with the fact that the evolution of heat is not at all *peculiar* to the union of these bodies, but is a circumstance common to all changes of every kind, in all forms of matter—there always being either the absorption or the evolution of heat.

There is no doubt that the analogy is very striking between the changes which *appear* to be wrought in respiration, and those which take place in ordinary combustion. A very little consideration, however, shows that the idea that respiration is the cause of animal heat, or that it is due to any other change of oxygen merely, is not only an assumption, but in the highest degree doubtful. In the first place, the carbonic acid thrown out when we expire, is certainly *not* made by the immediate union of the oxygen inspired with the charcoal expired; secondly, nothing is so obvious that in respiration there is an immense quantity of heat *thrown out* of the body. But as it is very desirable that the subject of this paper of Abernethy's on the Skin and Lungs should be understood, we will give the reader a simple view of the nature of these important organs; and as one (functionally considered) is as much a breathing organ as the other, we will say a few words first of the lungs.

In all animals*, the blood, or other fluid in which the elements of nutrition are sent to all parts, is exposed to the action of the air; and this is what we call breathing or respiration; and the exposing of the blood to air is so arranged that both fluids are in *more or less* rapid motion. The staple constituents of the air, so to speak, are about one-fifth oxygen and four-fifths nitrogen gases, with about two parts perhaps in a thousand of carbonic acid; and although, as we too well know, the air is occasionally polluted by many *additions*, yet, whether we take air from the top of Mont Blanc, or a cellar in London, the *staple* principles of oxygen and nitrogen have their proportions unchanged. The air breathed by animals who live in the water is somewhat differently constituted; the proportion of *oxygen* is considerably *greater*, probably about as much as one-third or thirty-two parts in one hundred; so that fish breathe a more *highly oxygenated* air than we do.

Now it is found that, when we inhale the air of the atmosphere (that is to say, one-fifth oxygen and four-fifths nitrogen), we expire some oxygen, some carbonic acid, and some nitrogen also; and to ascertain the *actual changes* which took place, was the object of Abernethy's inquiry.

The subject is one of great interest to the public; and, in justice to Abernethy, we should remark (that which perhaps a few more years may render it more important to record), that this essay was written more than half a century ago—1793.

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* This statement does not hold in regard to Entozoa (animals living in the bodies of others), or at all events is not proved.

Thousands die every year of affections of the lungs; and many diseases of these organs, if not in their nature incurable, have too generally in practice proved to be so. There are not wanting, however, many persons who ascribe these mournful results, not so much to the abstract difficulty of the case, as to imperfect and erroneous views of the functions and relations of these important organs; and who entertain the opinion that the investigation of the subject has been, either from pre-conceived notions, from a too limited view of the phenomena, or from some other cause, so infelicitously conducted, that the conclusions arrived at have been either merely assumptions, extremely doubtful, or absolutely erroneous.

It is sufficiently obvious that if we are ignorant of the use of any part of a machine, it must be the most unlikely thing in the world that we should know how to set about repairing it when it is out of order; and the matter must be still worse, if we should happen to ascribe to certain parts of it purposes different or contrary to that which they as really fulfil. So, in an animal, if we are ignorant of the use and relations of any organ, it is very improbable that we can understand the nature of its disorders, or treat them in any case successfully, except by the merest accident, which, though it may waken us up to a sense of our ignorance, leaves us so blind to the causes of our success that we have no power of repeating it.

Now this is pretty much the actual state of affairs in respect to diseases of the lungs. No investigation of any organ is worth anything, unless it include its relations with other organs in the same machine.

What should we ever learn by looking at the mainspring of a watch, apart from the general machinery to which it belongs? Though we should look for ever, and employ a microscope to boot, it is clear we should never arrive at the perception of its true relations.

Abernethy's inquiry derived great interest from the investigation of the skin by which it was preceded, and which seems to have formed his primary object. A few words on this wonderful organ may help the unprofessional reader to form some estimate of its relations and importance. As, in all animals, it is the surface in immediate contact with external influences—the first which attracts our notice—the first which we instinctively interrogate as to the state of the animal, so it is of all others the first which presents to us the evidence of design and adaptation. We tell the climate an animal inhabits, with moderate certainty, by looking at the skin; and if we occasionally meet with apparent exceptions, further examination usually shows that they exemplify the more strikingly the unity of plan. Thus we may find animals who inhabit *hot* regions furnished with a somewhat warm covering of the skin; as the tiger, for example: but when we examine the eye, and inquire into the habits of the animal, we find that he preys or feeds at night, when the atmosphere is charged with damp and cold.

We know that the animals whence we obtain our furs inhabit cold regions. The changes in the same animal are not less instructive. Animals placed in certain circumstances, in which they require greater warmth, have increase of covering, and *vice versâ*. Again, the tendency to become white, in those inhabiting cold regions, is a very interesting adaptation, although I am not aware that it has been satisfactorily explained. Two things, however, are certain: that they are placed in different circumstances as regards the relation to heat, and would reflect a great quantity of light, which, in its intensity in snowy regions, might be prejudicial, as there is no doubt of the influence of this principle in animals. Again, it is a very common arrangement that animals should take the colour of the ground they occupy; and this is sometimes very curiously exemplified. I have observed in the common hunting-spiders which inhabit some palings in a garden in the country, that they are of different shades, but they all more or less resemble that part of the old paling on which they are found. Those which we see on the ground are generally of some dark colour. Birds exemplify in a very remarkable manner the adaptation of their external coverings to the requisitions which their habits establish. All animals may be said to be surrounded by an atmosphere of their own, and they are not therefore, strictly speaking, in contact with the atmosphere; but when they are exposed to air in motion, this stratum is blown aside, and the atmosphere is brought in contact with the surface. Its refrigerating influence is now felt; and, just as a boy cools his broth by blowing on it, a fresh stratum of cold air is constantly brought to the surface.

The power of resisting or limiting this refrigerating influence is somewhat differently conferred in different animals: in the healthy human subject, by increased activity of the vessels of the skin, which induces greater heat. Birds, in their rapid flight, and especially in the more elevated regions of the atmosphere, are exposed to intensely refrigerating influences. These are met by the surface being clothed first by fine feathers, the worst of all conductors of heat, and these are overlapped, where they meet the atmosphere, in such a way that the bad-conducting property of the feathers is increased by the mechanical arrangement of them. Again, the respiration of birds, which *(as we contend)* is a refrigerating process, is very restricted; although, for want of due consideration of all the circumstances, and especially of certain analogies afforded by insects, very opposite views have been entertained. Domestic animals (birds inclusive) impressively suggest the refined adaptation of colour even, of the whole surface, to the altered position of the individual. Nothing is more striking than the general uniformity of colour in wild animals—few things more familiar than their infinitely varied hues when domesticated. Now it is certain that these differences have a meaning, and that their relations are important; but when we extend these thoughts from the coverings of animals to the consideration of surface, whether of animals or vegetables, what wonderful things occur to us. Every variety of colouring which we observe in domestic animals, every spot on an insect's wing, every pencilling on a a flower, places the individual in a different relation, so far, to light, heat, and other powerful agents in nature.

Or if we look from another point of view—we cannot walk by a hedge-row in summer without observing how very small the differences of light and aspect are, which seem on the same soil to confer on the same species of flowers such numerous varieties of colour. I have most frequently observed this in the common cranes-bill, or wild geranium.

In order to estimate correctly the value of these surfaces to the animal or vegetable, it is obviously of great importance to us to know what they do; and if they give off any thing, to ascertain its nature. That either animal or vegetable may be healthy, the processes of nature, whatever they are, must be carried on; and we may be assured, that the fragrance of the rose is just as necessary an exhalation *from* the plant, as it is an agreeable impression *to* us.

But all animals may be said to breathe quite as much by their skin as by their lungs. Leaves, too, are the breathing surfaces of vegetables; and, therefore, to ascertain the facts in the one, without inquiring into those observable in the other, would be likely to fog our reasoning and falsify our conclusions. The first impression we obtain from all animals is from external form and appearance—from, in fact, its outward covering. It was the first organ to which Abernethy devoted his most particular attention; and here again his investigations show how little those knew of his mind who imagined that his thoughts were restricted to any one set of organs.

In whatever light we view it, the skin is, in all animals, a most important organ; and so much so, as—drolly enough—with the exception of the human subject, to have been long popularly so considered. Yet so imperfect have been the investigation of its functions, that we are at this moment chiefly indebted to the early experiments of Abernethy for what we know that is positive on the subject. The original experiments of Sanctorius were quantitative and, as general truths, of sufficient importance to have excited more attention. Cruikshank's were highly acceptable; but they were less numerous and less varied than those of Abernethy; whilst the labours of Edwards, though exhibiting great industry and zeal, were by no means so conclusive as those of Abernethy. Edwards' experiments served to strengthen and confirm, by the analogy afforded by other animals, conclusions drawn by Abernethy from the more secure premises furnished by the *observation* of corresponding functions in man.

Mr. Abernethy's inquiry was first directed to ascertain what the skin actually gave off from the body; and secondly, what changes took place in the air which we draw into the lungs (inspiration). We will endeavour to give some idea of these experiments. They were very simple—they involved no cruelty, like those of Edwards—and they were many of them such as the public might repeat without difficulty.

Very useful would it be, if persons who have leisure would sometimes engage in physiological inquiries. They would find them to be extremely interesting; and a series of facts would be easily collected, from which the physiologist might obtain the most valuable information, but which, engaged as most of us are in applying physiology to the correction of disordered functions, we can seldom collect for ourselves, except in a few hours stolen from those occupied in an arduous profession, and perhaps by the sacrifice of paramount duties.

Mr. Abernethy's experiments were very numerous, and commenced in the summer of 1791; but the winter's cold obliging him to desist, they were renewed in the spring of 1792. Having referred to the experiments of Ingenhous and Cruikshank, together with an allusion to a paper (not then made public) by Lavoisier, he proceeds to describe his own.

Having a trough containing a large quantity of quicksilver, he filled a glass jar (sufficiently capacious to contain his hand and wrist) with that metal. He inverted it into the trough in the usual way of proceeding in collecting gases. He fixed the glass jar in a sloping position, that he might introduce his hand the more readily beneath the quicksilver. In this way, whatever was given off from the skin of the hand, rising through the quicksilver to the top of the glass, and of course displacing a proportionate quantity of quicksilver, could be made the subject of analysis.

He describes his first experiment as follows: "I held my "hand ten minutes in the jar beneath the surface of the quick-"silver, and frequently moved it in that situation, in order to "detach any atmospheric air that might accidentally adhere to it, "and afterwards introduced it into the inverted jar. The quick-

“ silver *soon acquired* a degree of warmth which rendered it not “ unpleasant. Minute air-bubbles ascended to the top of the “ quicksilver, more speedily in the beginning of the experiment, “ more tardily towards the conclusion. After an hour had elapsed, “ I withdrew my hand; the bubbles of air, which now appeared “ on the top of the quicksilver, were, I suppose, in bulk equal to “ one scruple of water.

“ In *sixteen hours,* I collected a half-once measure of air, which “ makes fifteen grains the average product of an hour. No kind “ of moisture appeared on the surface of the quicksilver. Some “ sucking-paper was put up, which was withdrawn unmoistened. “ My hand was always damp when taken out of the quicksilver. “ Whatever aqueous perspiration was produced, adhered to its sur- “ face, whilst the aeriform ascended to the top of the jar. To the air “ I had thus collected, I threw up some lime-water*, when about “ two thirds of it were rapidly absorbed; to the remainder, I “ added a bubble of nitrous gas†; but could not discover any “ red fumes, nor any diminution of the quantity. I repeated “ this experiment six times, with similar though not uniform re- “ sults. I believe it will be found that the air perspired consists “ of carbonic acid gas, or fixed air, a little more than two thirds; “ of nitrogenous gas, a little less than one-third. In one experi- “ ment, the nitrogen made only one-fourth part of the air “ collected; in another, I thought it exceeded one-third.”

He then made a series of experiments of the same kind, but substituting water for the quicksilver, sometimes heating himself previously by exercise. The results of these were not materially different from those in which he held his hand in quicksilver; but they are less clear, because the carbonic acid gas given off seemed absorbed by the water. In the next series of experiments, he held his hand and arm in atmospheric air. In this case, he found that, in addition to the giving off of carbonic acid, a portion of the oxygen of the air became absorbed. This is exactly what happens in the lungs. Now, as the carbonic acid, when given off, is in both cases coincident with the disappearance of oxygen, and as carbonic acid is composed of oxygen and carbon, it *had been* usually conceived that the oxygen taken in, contributed to form the carbonic acid given off; and the idea is still entertained very generally.

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* The test for carbonic acid.

† A test for the presence of oxygen.

The experiments of Abernethy, however, presently to be adverted to, in regard to the skin; and those of Edwards, long after, in regard to the lungs; satisfactorily prove, we think, that the carbonic acid is not *at all derived* in the manner supposed*.

To test this matter, Mr. Abernethy confined his hand and arm in various gases containing *no oxygen*—as hydrogen, and then in nitrogen; but he found the carbonic acid gas *still given* off as before. He then placed his hand in a gas (nitrous oxide) *containing* oxygen; and lastly, in oxygen itself, to see if it *increased*, or otherwise affected the elimination of carbonic acid; but in neither of those experiments was the carbonic acid thrown off, *increased*, or in any way affected by it.

In a subsequent part of the paper, he remarks on the idea that physiologists entertained of the carbonic acid given off by the lungs being made by the oxygen inspired; but he says, very justly, that the quantity of oxygen is too small for the formation of so much carbonic acid gas as we find given out by those bodies; and that his experiments on the skin clearly prove that the exhaling vessels of the skin emit carbonic acid in a state of *complete formation;* and then adds, what it is difficult to estimate the merits of, without recollecting that it was said half a century ago (and before the experiments of Edwards), "and, doubtless, those of the lungs perform a similar office."

This is one of those bold, and, we believe, successful reasonings from analogy which were very characteristic of Abernethy.

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* It is in this paper that he uses the significant expression "ventilating the blood," which looks as if the refrigerating effect of respiration—and which we have endeavoured to show is the real, though perhaps not sole, purpose of it —had not wholly escaped his notice.

The truth is, that even the experiments of Edwards, some of which were, a long time since, repeated by ourselves, with the same results, are not, I conceive, so conclusive as the analogy of Abernethy. It is true, they consisted of placing frogs and other animals in gases not containing oxygen, when it was found, notwithstanding, that there was *no* diminution in the quantity of the carbonic acid produced, and which therefore could not have been compounded of any oxygen in the gas. But even here many possible sources of fallacy suggest themselves. The previous expulsion *of all* the oxygen from the animal is obviously a matter of uncertainty. There are, besides, those sources of fallacy which are inseparable in some form or other from all experiments on animals which disturb their natural habits, especially when these disturbances are so great as to amount to suffering. From all such experiments Abernethy *instinctively* shrunk. His repulsion to them seems not to have rendered it necessary to him to have shown that they were as *physiologically inconclusive* as they were morally questionable. At all events, his present experiments were not obscured by any such sources of fallacy.

Still the idea of the carbonic acid exhaled by the lungs, being made up of the union of the carbon exhaled with the oxygen taken in, continued to be very extensively entertained. We can only say that to us it seems entirely a child of the imagination; what Horace calls

> "Mentis gratissimus error;"

and shows not only how few people can find leisure to investigate, but how few venture to observe or think for themselves. Abernethy also experimented by holding his hand in carbonic acid, when he found that in about nine hours, three ounces, by measure, of carbonic acid were absorbed by the skin; and in the remaining gas, a considerable quantity of other gas which had been given off, which appeared to be nitrogen.

Desirous of ascertaining the quantity of carbonic acid gas given off by his hand, in different gases in a single hour, he introduced his hand into various gases. In the experiment with

	Drs.
Nitrous oxide, there came off	6
Hydrogen	4
Atmospheric air	3

The test for the carbonic acid was, as before, in all cases, lime-water. He also found that the skin absorbed oxygen much more readily than most other gases. One remarkable experiment we will notice, to show how laborious all these investigations were, and for the interesting nature of the result. He placed his hand alternately in vessels containing each twenty-four ounces, by measure, of nitrogen and oxygen gases. After eight hours' exposure in each, two-thirds of the oxygen had disappeared, whereas only *one twentieth* of the nitrogen was absorbed. Indeed, there is no one feature of these experiments perhaps more interesting than those which suggest the stronger aptitude of the skin to absorb oxygen in comparison with other gases. For example, Abernethy found that the skin absorbed, by measure,

	Ozs.
Of oxygen gas, in eight hours . . .	8
Of nitrous gas, in five hours	3
Of hydrogen, in five hours	1½
Of nitrogen, in eight hours	1

Mr. Abernethy then made some experiments on his own lungs, after the manner that Mr. Cruikshank had done, to find the quantity of *water* exhaled, by breathing into glass jars filled with and inverted in quicksilver, and by other methods, and also to ascertain the change produced in the air by respiration. These are all interesting; but we can only give general results, referring to the work itself, as full of material for thought and future observation. He considered that, on the whole, the change in the air was, that in one hundred parts, consisting of

	Parts.
Nitrogen	80
Oxygen	18
Carbonic acid	2

about *three* parts of the oxygen were absorbed, whilst about *twelve* parts of carbonic acid were exhaled, the nitrogen being little altered, or even receiving some small addition. The quantity of *inspired* oxygen which disappeared varied in different experiments, probably depending on the depths of the inspiration, and the duration between it and the following expiration—the time, in fact, during which it was retained in the lungs. The smallest quantity which disappeared was one-twelfth; the largest, one-sixth. The moisture (water) exhaled, he found to be about three drachms in an hour.

These experiments, for the particulars of which we must refer to the book itself, contain a calculation of the extent of surface of the body, which he estimates at about two thousand seven hundred square inches—that is, about thirty-eight times that of the hand and wrist, on which he experimented. Thus, if we multiply any of the results he obtained by thirty-eight, we shall obtain some idea of the prodigious power of this wonderful organ, and of the vast influence which its various conditions must exert on the whole animal economy. The whole of the experiments in the paper are just as interesting as ever, and would, we are well persuaded, be found amply to repay further investigation.

They exemplify in every line his clearness of thought, and his care in deducing no other conclusion from the premises than that which they logically justify. The observations which he has annexed to his paper also are just, and of great practical value; they discuss the bearing that the whole has to the relation which exists between the skin and lungs, and the influence of this on the causes of that fell destroyer, popularly known under the title of Consumption.

They are a portion of that investigation of relation between various organs, on which anything like the formation of a definite and practical science must ultimately depend. We shall endeavour, in the sequel, to explain the ulterior consequences which necessarily arise out of such considerations, when they are duly followed out. We shall endeavour to point out the share they had, in conjunction with other considerations, in leading to those beautiful and simple principles which Mr. Abernethy was led more especially to advocate; and show how far *he* went, as describing the starting point of those who have endeavoured at a fuller development of the consequences of his views.

He remarks, justly enough, on the determination to the lungs consequent on the repression of the surface, and the necessary *additional duty thrown on those* important organs engaged in a common function with the skin, where the duty of the latter is not performed; and on the elements thus supplied for disease, *especially* in persons of restricted chest; relations, *be it remembered,* which exist between the various other organs of the economy, and which exemplify in a single case truly, what has been, we trust, since shown in regard to organs generally; how the organ, which may be the seat of the *disease, may not be* the seat of the original *cause,* but really a secondarily affected organ —a hint which, when followed out, is of *immense practical importance.*

The skin is by no means the only organ which has a community of function with the lungs, or through which these important parts become affected; but if this be so, and diseases of the lungs be treated as an *integral thing,* it requires no great penetration to see how diseases so handled must be incurable; since the real cause may never be ministered to.

Again, if a case should be successfully treated, by means which afford all possible relief to the *lungs,* whilst the *primarily affected* organ is also properly treated, it by no means follows that the treatment should be the same in *every case;* for the primarily affected organ may be different in different cases. There is, in fact, no organ of the body which, when subjected to disordering influences, may not *secondarily* affect the lungs.

The liver is especially apt to affect them. It is engaged, like the lungs, in throwing off large quantities of carbon or charcoal from the system, and has been not very improperly termed the "abdominal lung." It is constantly also sending through the medium of the heart a large quantity of blood to the lungs. Now, if this blood have not the proper quantity of carbon extracted from it by the liver, or if even the blood be excessive in quantity, why the lungs must have more to do; and many diseased lungs have been produced in this manner in cases where the chest has been well formed.

There are, however, many intimate relations between organs which do not depend on mere community of function. It is very important that the public should have clear views on this subject; and if they would only give a little of that attention which they so often bestow on things infinitely more difficult, there is no doubt many lives would be saved that are irremediably damaged, as Abernethy says, sometimes even before any symptoms have suggested that there is anything the matter.

But if there be a shadow of truth in Mr. Abernethy's views, and still more in those extensions of them to which they have naturally led, we may learn how necessary is that discrimination which traces disease to *primarily* affected organs; and how little success we may expect by treating the lungs, as the integral seat of disease, by specifics, or such remedies as tar, naphtha, cod-liver oil, various gases, &c. which come in and go out of fashion in a manner sufficiently significant of the claims they can have in a scientific point of view.

Mr. Abernethy also remarks on the comparatively restricted influence of scrofula in constituting consumption. "At one time," he observes, "I examined the bodies of many people who died of consumption." After describing other appearances which he found, he says, "the greater number were bestudded with larger or smaller tubercles, or *made uniformly dense* (consolidated)." He says, this disease (consolidation) is *very insidious*, that it is often established beyond the possibility of removal before it is suspected; but, he says, he thinks it might be known, for the capacity of the lungs is diminished; and suggests that this should be tested, by allowing a suspected case to *breathe into a glass vessel over water*, by which the quantity of air they can receive is rendered perceptible.

His remarks, too, on the treatment are highly interesting and discriminative, and will not only well repay attentive perusal, but that study which is necessary to the perception of their full force and beauty. When we have to sum up the various influences of the views of Abernethy, we may probably find space for a few facts on that which they exert on the treatment of the lungs and skin; and this not merely as affecting the health in general, but also complexion, and other conditions of these curious and important organs.

We are unwilling to dismiss this paper without directing attention to the illustration it affords of the erroneous views of those who imagine that Abernethy's investigations were confined to the digestive organs, and still less, of course, to one of them (the stomach). It would, on the contrary, be difficult to find any paper on physiology so comprehensive in its views, so simple and clear as to its object, so cautious and logical in its reasonings, so free from any bias, or with so little reference, either directly or indirectly, to what are usually understood by the digestive organs. On the other hand, it is an investigation which (as regards the relation which exists between two organs having a common function) is an exact type of what physiological investigation should be. For we have only to extend the idea of a relation which exists between *two* organs, to those which exist between *all* organs; to regard as their *combined* functions, the sustentation of the life and health of the individual, just as we have been regarding respiration, the common function of the skin and lungs; and we thus arrive at what must be the basis of any sound or comprehensive inquiry into the true relations of the various parts of the economy; by which alone we can interpret the phenomena of health and disease.

Moreover—however presumptuous the assertion may appear on the one hand, or however humiliating the view it implies of the present state of medicine as a science on the other—we must regard this investigation, in every philosophical sense of the term, as still among the "means untried" of the illustrious author whose words we have ventured to place at the head of this chapter.

CHAPTER IX.

HIS PAPER ON TIC DOLOREUX.

> "Quis talia fando
> Temperet a lachrymis."
>
> VIRGIL.

PERHAPS, of all known torments, there is none that can be compared, either in intensity or duration, with that curious disease which has been called Tic Doloreux. Like the term Neuralgia, it is merely a hard word to express a violent pain in a nerve. Conventionally, the term neuralgia, or nerve-pain, is generally used to express a case where the suffering is of a more or less diffused character. The term "tic" is more usually applied in cases where the seat of pain is found in some superficial nerve. Neither term has much claim to the character of scientific nomenclature; they are merely equivalent to saying that we know very little of the matter. This obscurity, however, may be soon lessened, if not entirely cleared, by any one who will go to work in the way suggested by Mr. Abernethy's principles, and in which, to a certain point, they will conduct him. He must, however, recollect that the pain, though a most distressing symptom, is still a *symptom*, and not the *disease* which gives rise to it.

This disease teaches us how beneficently framed we are in relation to all around us; and how small a deviation from a healthy condition of our sensations converts all usual sources of pleasure into so many elements of agony. The breeze, of late so grateful and refreshing, may produce more suffering than would be excited by the most intensely-heated furnace. In other cases, the cool spring, or the most delicious fruit, become causes of torture. We should exceed all reasonable limits if we were to enumerate all the usual sources of pleasure which, in different cases, are converted into so many instruments of suffering.

Tic doloreux is indeed a horrible malady; but one which, when properly considered, becomes very instructive. It admirably illustrates the views of Abernethy; and how ready he was to concede all that examination of the views of others which modesty and common sense require, as well as how superior his own were, both in philosophical acumen and practical value; first examining the views of others, and finding them defective, he, with the true philosophical spirit which first discovers what is wrong—

"Primus gradus est sapientiæ falso intelligere,"

then proceeds to develop his own.

The nerves are the organs from which we receive all our impressions from without; and when their ordinary sensibility is thus morbidly augmented, we may be persuaded that there is *something* very wrong within.

The tic doloreux is one of the examples showing how cautious and circumspect, and how modest withal, Abernethy was in advancing to his own comprehensive views of disease; and how entirely antithetical the method he pursued in arriving at them was to that which attempts to cut the knot of difficulty by gratuitous hypotheses.

When this disease first began to attract attention, it was suggested that it might be cured by the division of the nerve. The phenomena of the nervous system afforded abundant grounds for mistrusting the soundness of this view. The tendency, however, to confound the more salient symptom of a disease with its intrinsic nature, caused such phenomena to be overlooked or little considered; and the consequence was, that where the nerve was divided, the treatment was sometimes entirely confined to that proceeding.

In the end, the operation disappointed expectation; and that which careful reasoning might have predicted as probable, was left to be determined by experiment. In some cases, circumstances concurred to produce temporary relief; but on the whole the operation was a failure.

In the case he here published, Abernethy removed a little bit of nerve from a lady's finger. As she had suffered severely, and he was anxious to give her more permanent relief, he did not rest satisfied with merely dividing the nerve. For about nine months the lady was in comparative ease; but then the sensation returned. He remarks on the interest attached to this return of sensation, and observes on the analogy it suggests between the supply of blood, and that of nervous power. For if the vessels conveying the former be tied or obstructed, the supply is gradually restored through collateral channels. The return of the nervous functions, after the removal of a portion of the nerve, seemed to favour that view of the nervous system which regarded as the proximate cause of the phenomena some subtle principle or other, like electricity or magnetism, or some analogous power, of which the nerves might be the conductors.

Perhaps the most interesting fact of this case, however, was the significant bearing it had on those views which he was beginning to deduce from a multitude of other sources. The fact being, that when the lady died, which she did about four years afterwards, *she died of disordered digestive organs.* Showing, therefore, at least, the coincidence of the most severe form of nervous disturbance with disorder of these important functions.

We shall see, by and by, that Mr. Abernethy made this and other cases the instruments of much future good; but as we shall not be able to digress from that Summary of our obligations, which we shall then be employed in taking, we will add a few words here in aid of removing that difficulty which some people have in understanding how such dreadful pain can result from any organ in the interior of the body, where no pain is felt at all. In order to do this, it is only necessary to have a clear general notion of the nervous system. If you could take away everything but the nerves, you would have the brain, spinal marrow, and certain knot-like pieces of nervous substance (ganglions, as we term them) from which myriads of cords proceeded, varying in size from the smallest imaginable filaments up to moderate sized cords; the ends of the delicate filaments terminating in the various organs and on the surface of the body; millions of messengers of the most extreme sensibility, by which impressions are telegraphed with the swiftness of lightning between all parts of the body. There is, however, a habit or rule which is ordinarily observed, and that is one of the most curious things in the whole range of physiology—namely, that the immediate cause of our recognition of sensation is never in the part itself, but the action is constantly transferred to the extremity of the nerve. When you strike the ulnar nerve at the elbow (popularly termed, sometimes, the funny-bone), you feel it in the fingers to which its branches are distributed.

If you place your finger in cold or warm water, the action that makes you feel it is in the brain; and we infer this, because if we divide the communication between the brain and the finger, you no longer feel the sensation. Now, bearing this in mind, you easily understand how anything disturbing the nerves of any internal organ may produce pain in some distant branch; and that this is really so, many cases of tic doloreux have furnished conclusive and triumphant proofs. Now, as to *why* it should be seated in this or that particular site, is a question of extreme difficulty; as also in what organ the primary disturbance is seated, supposing it to have been in any of them. The former, I believe, is a question we have yet been unable to solve; the *latter* may usually be accomplished, *if sufficient pains be taken.*

Abernethy, in his lectures on this subject, when observing on the inefficiency of this division of the nerve—which was ministering to effects only—was accustomed to remark, with that peculiar archness of expression which his pupils must so well remember: "I wonder that it never entered into the head of "some wise booby or other to divide the nerve going to a gouty "man's toe." This was a very characteristic mode of terminating a discussion of any point which he wished to impress on the memory of the pupil.

SECTION.

OF HIS PAPER ON OCCASIONAL CONSEQUENCES OF BLEEDING.

In these days of improved statistical inquiry, it would be a curious document which should give us the comparative number of persons who are now bled, and that of only fifty years ago; and whilst it would present very instructive data as to the progress of medical science, it would give also some significant hints as to the relations of fashionable remedies. First, almost every barber was a bleeder; and within my own recollection, a lady, who for any serious ailment consulted the most eminent physician in the neighbourhood in which she lived, would allow no one to bleed her but the barber.

Formerly, multitudes of people lost a little blood every "spring and fall." Accidents of all kinds afforded a fine opportunity for bleeding. The papers announced accidents generally by the usual—"It is with regret that we learn that Sir Harry —— was thrown "from his horse in the Park. It was feared that the honourable "baronet had sustained serious injury; but, fortunately, Mr. "Sharpe was on the spot, so that the patient was immediately "bled. He was conveyed home, and we rejoice to hear that he "is doing well. The accident, which it had been feared was a "fracture, proved to be only a 'dislocation.'"

The questions in regard to bleeding were said to be—who, when, and how much *(quis, quando, quantum?)*; but, to our minds, Aretæus has a better saying: "When bleeding is required, there "is need of deliberation *(cum sanguinem detrahere oportet, deli-"beratione indiget)*." We like this better; because, in addition to the little words quoted above, it suggests another, more important than either—namely, *cur?* why—on many occasions, a favourite inquiry of Abernethy's.

We recollect a surgeon being called to a gentleman who was taken ill suddenly, and he found two or three servants and the medical attendant struggling very vigorously with the patient. Whilst this was continuing, the first question put to the surgeon by the medical attendant was:

"Shall I bleed him, Sir?"

"Why should you desire to bleed him?"

"Oh! exactly; you prefer cupping?"

"Why should he be cupped?"

"Then shall I apply some leeches?"

This, too, was declined; in short, it never seemed to have occurred that neither might be necessary, still less that either might therefore do mischief.

It is the most curious thing to see the force of a well-grown conventionalism. As long as it led to moderately bleeding plethoric baronets in recent accidents, no great harm would have been done; but the frequency in other cases, in which bleeding was instituted with "apparent impunity," was too commonly construed into "bleeding with advantage," until the practice became so indiscriminate as to be extensively injurious. *Now*, comparatively, few persons are bled; and some few years ago I had a curious illustration of it.

In a large institution, relieving several thousand patients annually, and in which, a very few years before, scarcely a day passed without several persons having been bled; nearly a month elapsed without a single bleeding having been prescribed by either of the three medical officers.

No doubt many persons are still bled without any very satisfactory reason; but we believe that the abuse of bleeding is much diminished, and that the practice is much more discriminate and judicious. From this, and perhaps other causes, a very important class of cases which engaged the attention of Abernethy, as it had that of Hunter before him, is become comparatively infrequent. When bleeding, however, was practised, with as little idea of its importance as some other of the barber-surgeon's ministrations, on all sorts of people, and in all sorts of disturbed states of health, and probably with no attention at all to the principles which should alike guide the treatment of the largest or the smallest wound; this little operation was frequently followed by inflammation of the vein, nerve, or other contiguous structures. These cases were, most of them, more or less serious, often dangerous, and occasionally fatal.

Taking up the subject where it had been left by Mr. Hunter, Abernethy refers to the cases published in the two volumes of the "Medical Communications," by Mr. Colly of Torrington, and by Mr. Wilson, and then proceeds to give some of his own. It is in this paper that he first moots two questions which have since grown into importance, by an extension of some of the practices to which they refer. We allude to the division of fasciæ, and tendinous structures, and also of nerves in states of disease or disorder.

In many cases we see, in the application of such measures, how much that clear and quick-sighted discrimination is required which so eminently distinguished Abernethy. He, however, only *mooted* these questions at that time; for he observes that he had not had sufficient experience to give an opinion. The chief value of the paper *now* is, the good sense with which it inculcates a more careful and cleanly performance of bleeding; a more scientific treatment of the puncture, by neatly bringing its edges into apposition, and by keeping the *arm quiet* until it has healed. Neglect of these cautions in disordered states of constitution, had no doubt been not infrequently accessory to the production of some of the serious consequences against which it is the object of this paper to guard. I need scarcely observe that the whole subject is important, and should be thoroughly studied by the young surgeon.

In 1793, Abernethy, by his writings and his lectures, seems to have created a general impression that he was a man of no ordinary talent. His papers on Animal Matter, and still more his Essay on the functions of the Skin and Lungs, had shown that he was no longer to be regarded merely in the light of a rising surgeon, but as one laying claim to the additional distinction of a philosophical physiologist. The subject (of the skin and lungs) had engaged the attention of Böerhaave a long time before; Cruikshank also, and other very able men, had followed in the same wake of investigation; therefore there was an opportunity of that test which comparison alone affords. Abernethy was, in fact, regarded at this time more in the light of a rising man, than merely a promising surgeon. He now moved from St. Mary Axe (as I am informed), and took a house in St. Mildred's Court, in the Poultry.

Sir Charles Blicke had moved to Billiter Square. I find, by the rate-books, which Mr. R. L. Jones was so good as to inspect for me, that this was in April, 1793. He could hardly fail at this time to have had a very acceptable portion of practice, although we apprehend it was not as yet extensive. His reputation was, however, fast increasing, which the attention paid to his opinion at the hospital at this time must have materially accelerated.

Certainly not later than 1795, there were very few cases of doubt or difficulty, in which (independently of that participation in the consultation at the hospital common to all the medical officers) there was not especial value and influence attached to his opinion; and I have heard a pupil of that day assert, that in cases of real doubt and difficulty, there was nothing more beautiful in itself, nor more characteristic of Abernethy, than the masterly way in which he would analyze a case, bring the practical points before his colleagues, and at the same time suggest the course he preferred. As, from his other occupations, it would often happen that some consultation might be pending whilst he was engaged at the theatre or in the museum, it would often happen that a consultation would terminate for the time by some one observing: "Well, we will see what Mr. Abernethy says on the subject."

In 1796, he became a Fellow of the Royal Society, his old preceptor, Sir William Blizard, being one of those who signed the proposal for his election. He only contributed one paper after this to the "Philosophical Transactions." After his death, the Duke of Sussex pronounced a very well-deserved eulogium, of which a copy will be found in another part of this volume. He had not been idle, however; but, in 1797, published the third part of the "Physiological Essays," which we will consider in the next place.

CHAPTER X.

HIS PAPER ON INJURIES OF THE HEAD.

"Utiliumque sagax rerum."

HOR.

IN estimating the practical penetration and clear judgment of Abernethy, it was almost necessary to see him placed by the side of other men.

His mind was so quick at perceiving the difficulties which lay around any subject, that it appeared to radiate on the most difficult, a luminosity that made it comparatively easy, by at least putting that which, to ordinary minds, might have been a confused puzzle, into the shape of an easy, definite, and intelligible proposition.

It was immaterial whether the difficulties were such as could be overcome, or whether they were in part insurmountable; both were clearly placed before you; and whilst the work of the quickest mind was facilitated, the slowest had the great assistance of seeing clearly what it had to do.

All this was done by Abernethy in a manner so little suggestive of effort, that, like his lecturing, it was so apparently easy, that one wondered how it happened that nobody could ever do it so well.

But when we saw him placed in juxtaposition with other men, these peculiarities, which, from the easy manner in which they were exhibited, we had perhaps estimated but lightly, were thrown into high relief, and by contrast showed the superiority of his powers.

The second series of Essays he had dedicated to his old master, Sir Charles Blicke. The third, the subject of our present consideration, he inscribed to his early instructor in anatomy, Sir W. Blizard. The dedication is straightforward and grateful.

The first paper of the series is interesting in two points of view. First, it was an important improvement in the management of a difficult form of a very serious class of accidents—"Injuries of the Head;" and secondly, it derives a peculiar interest from the parallelism it suggests between Abernethy and one of the most distinguished surgeons of France, the celebrated Pierre Joseph Desault—a parallelism honourable to both, yet remarkably instructive as to the superior discriminative powers of Abernethy. Desault's pupil, Bichat, himself one of the most accomplished anatomists of his time, has left an eloquent eulogium on Desault, which, although somewhat florid, is by no means above his merits. He says he was the father of Surgical Anatomy in France; and certainly few men evinced more sagacity, in that immediate application of a fact to practical purposes which constitutes art, than Desault.

Bichat, in his glowing analysis of Desault's character, amongst other things in relation to his study of the profession, observes of him that "Un esprit profond et réfléchi, ardent à entreprendre, "opiniâtre à continuer, le disposa de bonne heure à surmonter "des dégoûts qui précédent, et les difficultés qui accompagnent "son étude. A cet âge où l'âme encore fermée à la réflexion "semble ne s'ouvrir qu'au plaisir, apprendre fut son premier "besoin—savoir sa première jouissance—devancer les autres sa "première passion*."

A quick and clear perception, for the most part untrammelled by preconceived opinions, led Desault to a vivid appreciation of the immediate results of surgical proceedings; and as these were definite, successful, doubtful, or abortive, he either persevered with a characteristic tenacity of purpose, or at once and for ever abandoned them. He was remarkably happy in his selection and appreciation of the mechanical parts of surgery; and his quick perception disclosed to him several useful points in practice which depend on the more important truths of medical surgery.

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* Bichat, Eloge de Desault. Œuvres.

Now *almost* all this, as applied to the active portion of Abernethy's life, is equally true of both. But Desault was by no means so deep or so original a thinker as Abernethy. Like Abernethy, he was clear and penetrative; but he did not see nearly so far, nor were his views nearly as comprehensive. Desault was quick at detecting an error in practice, and in sensibly rejecting it. Abernethy would unfold it, examine it, and, by his talents, convert the very defect into usefulness. Desault had by no means, in the same degree, that power of reflection, that suggestive faculty, which, in endeavouring to interpret the meaning of phenomena, can point out the true question which it is desired to ask of nature, as well as the mode of inquiry.

All this, and much more, was strikingly developed in Abernethy. The paper before us involves a subject which had engaged the attention both of Abernethy and Desault. They had met with the same difficulty; and the practical solution of it which each obtained, though somewhat different, was extremely characteristic. We will try to make this intelligible. In severe injuries in which the cranium is broken, it frequently happens that a portion of bone is so displaced that it presses on the brain. The consequence of this, in *many cases*, is a train of symptoms sufficiently alarming in themselves, but the actual cause of which many circumstances sometimes concur to complicate or obscure.

The same forces which produce the accident not unfrequently involve a violent shock to the whole body. Sometimes fracture or other injury of other parts. Sometimes the patient is deeply intoxicated. Then, again, patients are presented to the surgeon, in different cases, at extremely different intervals after the reception of the injury; so that a case may wear a very different aspect according to period or the phase at which it is first brought under his observation.

These and many other circumstances give rise to various modifications of the symptoms, and, *under some complications*, constitute a class of cases which yield to none in importance or difficulty. There is something in the idea of a piece of bone pressing on the brain, which instinctively suggests the expediency of raising it to the natural level. This is, in fact, the object of what is called "trepanning;" or, as we generally term it, "trephining."

The operation is very simple; it consists in carefully perforating the cranium, and then, by means of an instrument adapted for that purpose, restoring the piece of bone, which has been depressed, to its natural level. In many instances, the proceeding was very successful; but in many others, the cases terminated unfavourably. From what has been already hinted, it is clear that, in many injuries of the head, this trephining must have been unnecessary; in others, inapplicable; and in both (as adding to the injury), mischievous. Still, surgeons went on as before; so that, in a large class of injuries of the head, there was (if the bone was depressed) an almost uniform recourse to the trephine.

Again, in cases where it did not immediately appear that the bone was depressed, too often very unnecessary explorative operations were undertaken to determine that circumstance. In short, there was too much of analogy between the matter-of-course adoption of the trephine in severe injuries of the cranium, and that which we have noticed in regard to bleeding in more ordinary accidents.

For correcting the abuse of this very serious operation, we are under great obligations to Abernethy and Desault; and we couple these illustrious names together on this occasion, because, although the amount of our obligation to Abernethy is much the greater, we would not willingly omit the justice due to Desault.

Desault may have been said to have given the first blow, which so often determines the ultimate fate of a mischievous conventionalism—that blow which *compels the consideration* of its claims on our common sense.

Desault had become extremely disgusted with the results of the operation of the trephine in his hands at the Hôtel Dieu; and, on consideration, although, as it would seem from Bichat's edition of his works, he did not in theory absolutely ignore the occasional propriety of the operation, he practically for ever abandoned it; thus at once cutting the knot he felt it difficult or impracticable to unravel. As this was many years before his death, the principal argument on which he supported the relinquishment of the operation was simply that his success in the treatment of injuries of the head had been much greater since he had altogether laid it aside.

This is eminently characteristic of what people call "a practical man;" but, after all, it is not very sound reasoning. Now, here it was that the discriminative excellence of Abernethy began to tell.

In the first place, he observed that the raising of the bone could only be necessary *where it produced symptoms.* He also observed that experience had recorded certain cases in which, notwithstanding that the bone had been depressed, the patients had recovered without any operation. Then again he thought it not improbable that, where the depression was slight, even though some symptoms might at first arise, yet, if we were not too precipitate, we might find that they would again subside, and thus so serious an operation be rendered unnecessary. These and similar reasonings led him to recommend a more cautious practice, and to refrain from trephining, even where the bone *was depressed,* except on conditions which referred to the general effects of pressure *on the brain,* rather than to the abstract fact of depression of the bone.

He did not stop here; but having thus placed restrictions on the use of the trephine, where it had been too indiscriminately employed, he then describes the practice which is to be pursued where the pressure is produced from *effusion* on the brain.

Although, in laying down the rules to be observed in such cases, there is much of painful uncertainty as to the existence of effused blood, the site it may occupy, and other circumstances of embarrassment,—still the rules he proposes in relation to the avoidance of large vessels, the condition of the bone as indicative of the actual state of the parts beneath it, &c. are all clearly and beautifully stated, as deducible from the anatomical and vascular relations of the parts. The result of all this discrimination is, that the trephine is seldom employed, whilst the treatment of the various injuries of the head is much more successfully conducted.

He next proceeds to consider the distinction between those cases in which the brain has been *shaken* merely (concussion), and those where it has been subjected to mechanical pressure. There are two points in this part of the paper of great interest to the practical surgeon: the one in which he treats of the distinction of the two cases; the other, in which he marshals the discordant practices of different surgeons in cases of concussion, and defines the proper phase of the case in which we may make them respectively applicable. When, for example, we may by warmth maintain, or even by cautious stimulation excite, the depressed powers; or, by judicious abstinence from either, avoid provoking too violent reaction; and, lastly, how we should combat the latter, if it unfortunately supervene.

His Remarks on the Assistance to be derived from the consideration of the Phenomena of Apoplexy, his reference to the cases which had occurred in the practice of other surgeons, and the observations he makes on the lamentable *omission of facts in the record of cases,* are all worthy of profound attention. Equally excellent is the ingenuity with which he attempts the distinction between the cases of concussion, and compression, of the brain. His endeavour to discriminate the cases in which the effusion, or inflammatory action, respectively, affect one or other membrane, is also extremely sagacious and characteristic. Whether we consider all or any of these features in the paper before us; or, lastly, that triumph of science and humanity with which he has so defined the limits of a dangerous operation, as to have achieved a comparative abandonment of it; we think most surgeons will be inclined to regard this essay as one of his happiest contributions to the improvement of practical science.

In 1804, he added some cases in illustration of the views unfolded in this paper; and one case which appeared to be exceptional, with what he considered to be its appropriate explanation. He also gives an interesting case of a suicide, in whom he had tied the carotid artery, and in whom the operation was followed by an inflammatory state of the brain. Here, again, his quick perception suggested to him the significant idea that *similar* conditions of brain might result from *different* and even *opposite* states of the circulation—a conclusion now, I believe, well established; one of great practicalimp ortance; and one for which, so far as I know, we are greatly indebted to the observations of Dr. Marshall Hall on blood-letting. In this case, Abernethy eulogizes the plan recommended by Desault, of feeding a patient by a tube introduced through the left nostril. In concluding this remarkable paper, which shows how much a great mind may extract from common subjects—

"Tantum de medio sumptis accedit honoris"—

we quote one remark, which impresses the importance of a requisition, the essential basis of all scientific inquiries—namely, a careful collection of facts.

"In proportion as we advance in knowledge," says Mr. Abernethy, "we are led to record many circumstances in the progress "of the disorder which had before passed without notice, but "which, if known and duly attended to, would clearly point out "to us the nature and remedy of the complaint. Hence the "records of former cases are of much less value, as the symptoms "about which we are *now anxious to inquire*, have in them *been* "*entirely overlooked.*"

CHAPTER XI.

ABERNETHY'S EXPERIMENTS ON THE MUSCLES IN FROGS, ETC.

"THERE are more things in heaven and earth than are dreamt "of in your philosophy, Horatio," is a sentiment which, in some form or other, occurs to the most uninformed peasant, and to the most profound philosopher.

The very small difference between the acquisitions of the two, however marvellous when viewed abstractedly, sinks into nothing when compared to the secrets of nature which yet remain unexplored. This comparison is the true source of that humility which, while it adds dignity to the acquirements of intellect, is the foundation on which we may most securely rest the hope of increasing possessions.

The intellectual vision of the wisest man confines him to a very small area, when compared with the boundless realms of nature. There are, indeed, a number of objects within the range of his perceptions whose nature and relations he has the power of examining; but there are also a multitude of others which, from their dimly sketched outline, he feels to be beyond the bounds assigned to his limited faculties.

One of the most curious things in animals is the rigidity or stiffness of their muscles after death. It is, as it were, the last effort of the living principle. This phenomenon may be indefinitely modified by particular states, by lightning, by poison, and other peculiar conditions, induced by the manner and the period at which the death may have occurred; and in all cases it continues but for a short time. It is the last exercise of that power which resides in muscles or flesh, of contracting, and thus moving the various parts to which it is attached. In a very large sense, this power is under the dominion of the will, and enables animals to move as their instincts or their wants suggest.

Now it is a curious thing to think that this power can be excited after death, by placing the parts between two pieces of metal, or galvanizing them; so called after the name of the discoverer, Galvani.

It is difficult, at this day, to imagine the astonishment of the wife of Galvani, or his pupil, when first they observed the leg of a dead frog thrown into convulsions on being touched by a piece of metal. Such, however, was the apparently simple origin of a long series of wonderful discoveries. It has been well observed, however, that "discoveries, apparently the result of accident, "always imply the exercise of profound thought." And this was no less the case in respect to galvanism. A fact, which, but for the mention of it to Galvani by his wife, might have passed unobserved, was, by the scarcely less than creative power of mind, improved into a most important branch of human science.

Ignorant as men still remain of the *intrinsic nature* of the principle or power which gives rise to the phenomenon, the observation and study of *its laws* and *operations* have led to discoveries which, in their value, their importance, and their surprising character, yield to no other yet achieved.

Abernethy, who, at this laborious period of his life, had his observation directed everywhere, made some experiments on this power (galvanism), in its relations to the muscles of frogs.

His object seems to have been as follows: Fontana (a celebrated physiologist, born in the Tyrol about 1734) had showed that a muscle which could no longer be excited to contract under water, might be excited anew, if taken out of the water, and exposed for some time to air. This observation had suggested the idea that air was in some way or other conducive to this "irritability," as it was termed. Dr. Girtanner had also endeavoured to prove that the irritability depended on the oxygen taken into the blood during respiration; and further, that it was in a direct ratio to the quantity of oxygen respired—"an opinion which some writers in this country seem disposed to adopt."

Abernethy doubted the soundness of such a view, and he accordingly instituted some experiments, in the hope that if he could not absolutely determine the question, he might throw some light on it. His experiments were very numerous, but he published only a few of them. We will give one or two. "*Having killed a frog* (for he properly objected to experiments "on *living* animals), he experimented on the muscles of two legs; "one was put into a bottle containing oxygen gas procured from "manganese, and which was very pure; the other into a bottle "containing atmospheric air; the quantity in each bottle was "about six ounces by measure; the limbs were supported in the "gases, and wholly surrounded by them. After five hours, the "muscles had nearly ceased to act in both limbs; those, how- "ever, of the thigh belonging to that limb inclosed in the *common* "*air* acted more vividly than the others, but in a little time even "these could no longer be excited. Upon comparing the limbs "afterwards, the muscles of that limb which had been exposed to "the oxygen gas were evidently the most flabby. Several other "trials were made with a similar result;" whence he observes: "I "am disposed to conclude that oxygenous gas has *no greater* "*power* of supporting the irritability of parts *separated* from the "animal than the common atmosphere."

In some of his experiments the limbs continued to be excitable after eighteeen hours, but with little difference in the two gases.

He next made several experiments, by placing the limbs of frogs in *nitrogen* and *hydrogen:* the limbs in nitrogen lost their irritability in about *two hours and a half;* those in nitrogen, in about *four* hours.

Experiments then follow which consisted in placing other limbs in carbonic acid and nitrous gases respectively; when he found that in both cases the muscles ceased to act in an hour and a half.

He also placed limbs in carburetted hydrogen, and found that they ceased to act after the same period. In other experiments, he found the correctness of Fontana's results; viz. that limbs placed under water, and which had lost their irritability, had for a time recovered it by exposure to air and moisture.

Perhaps the most interesting of the whole series are those in which he compared the results obtained *in vacuo* and atmospheric air. He says: "I put one prepared limb of a frog under the "exhausted receiver of an air-pump; it lay on a plate of glass, "supported by a cup; zinc was placed beneath the thigh, and "gold under the leg; and, by means of a probe passing through "a collar of leather, I could touch both metals, so as to excite "the muscles to contraction. This I did occasionally, and found "the limb capable of excitement for twenty-two hours. The "corresponding limb, which was left exposed to the atmosphere, "also contracted at the end of that time; so that it was doubtful which of them retained their powers in the greater degree. "The same experiment was repeated several times, with results so "nearly alike, that I am inclined to believe *irritability* continues "very little longer in common air than it does in the exhausted "receiver of an air-pump.

"I have frequently produced numerous contractions in the "limbs of frogs inclosed in azotic, hydrogenous, and other gases; "which likewise tend to show that the cause of irritability does "*not depend on oxygen* for its power of action."

He then remarks that, notwithstanding the great importance of oxygen, he thinks it has been overrated; for, says he, "Different tribes of animals partake of it in different degrees; and "those who have the least of it are far *from being the least* "*vivacious.*"

He here reasons on premises which were then universally admitted, and which form at present a portion of many very questionable impressions in relation to respiration.

We mention one: "that fish, frogs, &c. breathe less oxygen than warm-blooded animals." But whilst, in respect to the frog, there are many conditions relating to the skin to be considered before we can admit this proposition, we hold it to be *demonstrable* that fish breathe more oxygen than most other animals; due attention not having been paid to the enormous proportion of oxygen in the air found in water; being in fact, about, one-third. In his concluding remarks, he says, that as regards nitrogen, hydrogen, and carbonic acid, it only shows what we knew before:

that they are injurious to life, and that oxygen is not more beneficial than common air. The experiments "showing the long "continuance of life and action in muscles in an exhausted re-"ceiver, he considers worthy of notice, as tending to show that "the cause of irritability in muscles, when once formed, does not "require the assistance of external matter."

Lastly, he gives an experiment on the blood (which shows how he was working in every direction), in aid of the opinion that the blood derives its scarlet colour from the action of oxygen. "I took the coagulum of venous blood left in a basin after bleed-"ing, and, turning it bottom upwards, waited till its surface had "become of a scarlet colour. I then took slices of this surface, "and similar slices of the interior part of the coagulum, which "had a very dark appearance, and exposed them repeatedly to "azotic and nitrous gases. The scarlet colour gradually faded "upon such exposure; and the azotic gas being afterwards exa-"mined, was found to contain oxygen; while nitrous gas was much "diminished, doubtless by combining with the same principle. "The gases to which the dark-coloured blood was exposed under-"went no change in this experiment. That blood takes oxygen "from the air, when it becomes florid, will not, I suppose, be "denied, and the experiment I have related shows that it will "again part with it, though slowly, without *any alteration in its* "*temperature*."

The principal interest, as we think, of this paper on "Irritability," is the evidence it affords of his determination to keep his mind free from preconceived notions on a subject which was at that time calculated to mislead him; especially as he then participated in the general impression that the Oxygen was "the great source of animal heat;" a view which he afterwards, and as we think for excellent reasons, mistrusted.

This view has been revived, but, as far as we know, in no very philosophical spirit. Whilst we would respect the opinions of men, we can only reason on the paramount authority of nature; and we see increasing ground to believe that he who would leave out of physiological inquiries so large a portion of the necessary induction as the phenomena of disease, no matter what be his authority, will only add to the number of those who have shown that, the moment we neglect the most comprehensive search for facts of which our knowledge admits, we fall into error. Mr. Hunter has recorded his opinion of the impossibility of obtaining a knowledge of functions without considering the phenomena of disease; and all experience hitherto has tended to give this observation the validity of an axiom.

CHAPTER XII.

OF EXPERIMENTS ON ANIMALS.

> "Know, Nature's children all divide her care;
> The fur that warms a monarch warmed a bear."
>
> POPE.

In the foregoing experiments, the reader will have observed the significant words, "having killed a frog"—Abernethy not approving of experiments on living animals. When we reflect for a moment on the thousands of dreadful experiments which have been made on living animals, and the utter inconclusiveness of them for any useful purpose, there are, amongst the numerous errors by which so many philosophical inquiries have been delayed or defeated, few that are more lamentable.

This mode of investigation has not, so far as we can see, produced *any one useful discovery;* whilst it has tended to obscure, by all that is disgusting and repulsive, the true mode of cultivating a most alluring science.

But as we write, however humbly, as physiologists, and may be regarded as advocating the claims and attractions of that science with something of the *esprit de métier,* rather than in the cautious spirit which should characterize a philosophical discussion,—let us for one moment consider the claims of physiology on the attention of mankind.

Physiology has for its object the investigation of the functions and relations of the whole organic kingdom (the vegetable and animal creation), and cannot be successfully cultivated without consulting the phenomena in both these kingdoms of nature.

The branch of physiology most interesting to the medical philosopher is that which deals with the functions of animals in general, and of man in particular. The special interest to the medical philosopher is therefore obvious: let us just glance at its more general claims. Linnæus said that the world was one vast museum; and it illustrates the nature and attributes of the Deity.

But how? In the first place, by the numerous evidences it *everywhere* presents, even to our finite capacities, of design, wisdom, and power; and further, of the Unity of that power. But, to our finite perceptions, it does not *everywhere* present evidences of love, mercy, and parental care. Not because they may not exist universally, but because our faculties do not allow us to connect these ideas with any but " sentient beings."

This alone renders physiology one of the most elevating of all human studies—most general in its application—most comprehensive in the attributes it unfolds to us, and therefore most refining to our moral nature.

Although, therefore, we would claim the *special* theological evidences of physiology, as the distinguishing excellence of this science, it is not less commanding as regard the evidences which it affords in *common* with other parts of the Creation.

In animals, we see not less indications of design, wisdom, power, and beauty, than elsewhere; but we *also* see a provision for their wants and comforts, of such a kind as leaves no room for doubting that both have been the objects of design. We need not here go into the multiplied proofs of this proposition. *A priori*, then, it would seem very unlikely that a mode of investigating the functions of animals would be productive, which begins by ignoring one of their most striking relations.

This, too, at once suggests the moral question, Is it right? There is no necessity, for our present purpose, to moot that question. We have, over and over again, challenged investigation; but the case is too clear to admit of discussion. Again, although we humbly submit that the moral bearing of philosophical questions must always be a legitimate subject of inquiry, yet it is inexpedient to introduce that question where it is not required. The questions whether the progress of physiology has been *accelerated* by experiments on living animals, or whether the *treatment of diseases* has been improved by that mode of inquiry, or whether it has *tended to mislead people* into erroneous and mischievous views, are all things that admit of proof entirely independent of moral considerations. Now we should be sorry to appear to undervalue that which we most highly prize, or to represent that to be irrelevant which is, in all subjects, the great consideration; but it is wise to take the ground chosen by those who argue in support of a fallacy; not that which they would ignore, or regard as disputable.

As we have already observed, we think it demonstrable that experiments on living animals, *involving cruelty*, have been entirely unproductive, whilst they have tended to mislead more than any other mode of investigation whatever. Many years since, we corrected some very extraordinary mis-statements in regard to the experiments of Orfila, Sir Charles Bell, and others, which could only be accounted for by a want of attention to the works from which they were selected; for it is curious to observe that (though different in kind) the most conclusive evidence of the erroneous value attributed to the experiments is furnished by the distinguished authors themselves.

Orfila wished to know what would be the effect of various poisons on the animal economy. He therefore set to work as follows:—He opened the gullet of a living animal, put in the poison, and then tied the tube; and this to ascertain how the stomach dealt with substances of this kind taken into that organ. Now there have been, unfortunately, too many instances afforded, by accidents and by suicides, of these very things in the human subject; presenting us with a series of facts, deplorable enough, it is true, but which, regarded merely as grounds of philosophical inquiry, are comparatively free from objection; whilst the experiments made by Orfila on his tortured animals are obviously loaded with all the elements of fallacy. It is surely not necessary to urge, as one of these, so serious a preliminary as placing a ligature on the gullet. We say nothing of the horrible cries that Orfila describes these animals as uttering; but surely, if the object had been to interfere with and obscure the processes of nature by every conceivable ingenuity, one could not have imagined any conditions better calculated for this purpose.

Sir Charles Bell was a physiologist who distinguished himself by a really important discovery; and it has been cited as an example of the successful application of the mode of inquiry in question. This is entirely an error. Whoever will read his book, will at once perceive the truth of that which he himself judiciously observes; namely, that physiology is much more a science of observation than experiment. As to the influence of experiments on animals, in his own discoveries, we have the best possible authority for denying it; viz. Sir Charles Bell himself. He states very clearly the object with which he was *reluctantly* induced to make some experiments. They had, in fact, nothing to do with his *discovery*. They were made in reluctant concession to the slowly-paced perceptions of others.

This he had the manliness to acknowledge, and the benevolence to regret. In short, examine what series of such experiments we may, we always find them either wholly unproductive, or, if they appear to prove anything of value, it is always something that is much more *logically* deducible from sources altogether unobjectionable. But if this be so, is there no mischief in unproductive modes of inquiry? Again—putting aside the brutalizing tendency of such practices as part of the moral question—Is life so long? Is Science so easy? Is Physiology, and especially the deplorably halt condition of Medical Science, in such a state that we can afford to waste time in *vicious modes* of inquiry? We think not. Is there nothing mischievous in our endeavour to obtain by the evidence of sense (the eye) that insight into nature which Lord Bacon has so emphatically warned us is the office of higher—in fact, of our intellectual—perceptions? If we are not allowed to indulge in feelings of disgust and abhorrence at all that is revolting to common sense, and our best and kindliest sentiments, can we read, without distrust, of experiments which so disgust by their nature that we know not how to describe them; or which are so revolting, from their cruelty, that the mind recoils from the contemplation of them? Is it possible to read many of the experiments of Spallanzani*, without feeling the same disgust that Abernethy used to express in regard to them; or to read of opening animals alive, dividing them with instruments, breaking their bones, or running red-hot wires into their cavities, without feeling (if, indeed, any thing better is to be regarded as merely "mawkish sentimentality") that at least valuable time has been wasted in pursuits which have been brutalizing and unproductive?

In a review of a Biography of Sir Astley Cooper, in the "Quarterly," an experiment there described was characterized by the writer as "Hellish." We have no desire whatever to use unnecessarily strong terms; nor do we think that the one above mentioned was too strong for the case to which it referred; but we think that this extremely fallacious mode of investigation will be most quickly abandoned, by meeting fairly and in a mild and moderate spirit any allegations in its favour. Dr. Hull, of Norwich, and several other eminent persons, have expressed their dissent from this mode of inquiry.

Sir Isaac Newton considered cruelty to animals a violation of Christian charity†.

For our part, we have several times stated *our willingness to discuss* any class of experiments which may be selected; for, although we may not express ourselves so well as a late writer in the "Quarterly," yet to our minds heaven and hell do not present an idea of greater contrast than that afforded by the notion—that laws which govern the whole animal kingdom, and which present, at every moment, accumulating evidences of goodness and mercy, should be auspiciously sought, much less have their nature and relations developed, by torture of those very objects for whom such benevolent provisions have been designed. We have paid some attention to this subject; and it is very curious to remark, that observations or experiments, when they cease to be cruel, become instructive.

Indeed, if we reflect for a moment, we shall see that it must be so. If we desire to know the actual nature of any living being, it must be as if we were ourselves unseen—that is, that the animal may be in a *perfectly* undisturbed condition. The moment we *lose* this, elements of interference immediately arise and fog our reasoning; and the more refined the inquiry, the more the avoidance of disturbance becomes essential: in fact, the utmost success in obtaining the conditions *philosophically* necessary, depends on maintaining as nearly as possible the natural condition—that is, the comfort of the animal; so that the conditions necessary on philosophical grounds, and those which we regard as still more important after all, coincide.

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* See the extracts from his Lectures at the College, in this volume.

† See Life by Brewster, 2 vols. 8vo.

In every path of life, there are unpleasant duties; and it might have happened that the functions of animals could only have been investigated by the means we would repudiate: but the simple truth is, that it is demonstrably otherwise.

Abernethy had a decided objection to experiments involving cruelty. He never made any himself that could fairly be so called; and he never alludes to the subject without some remark tending to show his disapproval of them. Nor is it, in our view, any disparagement that his benevolent feelings were largely influential in governing his opinions on this subject. He began his researches, with the ability and inclination to investigate Life under every phase, at a time when no one had begun, so far as we know, to question this mode of investigation. But, whilst he left no other untried, he only recognized experimenting on living animals so far as to show that his benevolence could be sufficiently discriminative to select experiments where the existence of suffering was doubtful, and that the doubt alone was sufficient to induce him to abandon the pursuit.

We are sorry to dismiss a subject of so great importance, both in a moral and physiological point of view, with what we feel to be so meagre a discussion. But it would require more than our whole space to examine the many thousand torturing experiments, and expose the uselessness and *fallacies* which they exemplify. We have elsewhere discussed the subject somewhat more at large*:

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* Remarks on Vivisection in relation to Physiological Investigation. T. Hatchard, 1847.

here we have only the opportunity of just touching on it. The greatest respect we can pay the memory of a great man, is to apply carefully any principles which he may have left sufficiently matured for practical purposes; and so to treat those of which he may have only *given us hints, or elementary suggestions**, as shall most searchingly examine their nature and claims to further development and cultivation. If every opportunity is not sufficient to do this in full, we must comfort ourselves with the hope that, where there is not ability to produce conviction, there may appear sincerity of purpose sufficient to suggest what is even more valuable, " patient inquiry."

This is a duty we owe to every subject on which we venture to form any opinion, either in the study or the practice of our profession; and we have the utmost confidence that the scientific investigation and the moral argument will be found to coincide.

" Heaven's attribute is universal care,
And man's prerogative to rule, but spare."

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* See Extracts from Lectures. *infra.*

CHAPTER XIII.

HIS REMARKS ON TUMOURS.

"Cogitatio in vero exquirendo maxime versatur. Appetitus impellit ad agendum."—CICERO.

"The Intellect engages us in the pursuit of Truth. The Passions impel us to Action."

IN our brief sketches of Abernethy's works, we are quite as desirous of showing why he did not do more, as we are of setting down faithfully our many undoubted obligations to him. This, indeed, is the best mode of giving an onward impulse to those approaches towards a definite science which (John Hunter excepted) he was the first to secure. If we would increase the usefulness of those beautiful principles which he has left us, we can hardly do better than endeavour to point out any error or deficiency in the investigation of any subjects to which such principles may be applicable. His work on "Tumours" contains much that is interesting in regard to the peculiar character of his mind, and his aptitude for simplification. He does not undertake a thorough investigation of the subject. His object seems to have been to place in an intelligible order, to chronicle and mark, that which was *really* known; to pack together, as it were, that which was clear and positive, in a form convenient for consideration; to remove that disorder and obscurity which seem to hang about the threshold of all inquiries, and substitute so much of arrangement and perspicuity as might invite, and perhaps facilitate, further investigation.

He states the more important circumstances which he had observed, and conducts his classification of the so-called "Tumours" on a basis as scientific as it could be on an imperfect induction of facts. He did this in a way eminently characteristic of his quick perception, in seizing those properties on which a nomenclature should be based, and in marking those distinctions which, in a practical science, must always be regarded as of the greatest value. He founded his nomenclature chiefly on certain resemblances, observed in these diseases, to well-known structures of the body.

The simplicity of this plan, so long as the resemblance is obvious, is just that which constitutes excellence in nomenclature. To take an example, amongst others, he says there is a tumour the structure of which resembles the Pancreas, or Sweetbread as it is popularly called, and to this tumour he gives the name of Pancreatic. Now every one knows a sweetbread, and the name implies no opinion whatever as to its nature; it simply declares a fact. Whatever we may ultimately discover with regard to tumours, a name of this kind, though it may possibly be exchanged for one more significant of the nature of the disease, will still leave us nothing to unlearn; for the tumour in question will always have that resemblance from which Mr. Abernethy named it; and if we should find (as indeed we do find), in course of time, that diseases undergo alterations of type, the rarity of a tumour resembling the sweetbread would record that circumstance.

Had he examined them by the microscope, and selected the appearances so elicited as grounds for his classification, it would have been much less useful. In the first place, comparatively few persons would have had the opportunity or taken the pains to *observe;* and secondly, we should have had the inconveniences resulting from that variety which we generally find in the reports of microscopic researches. There is just now a great disposition for microscopic inquiry, perhaps somewhat too much; but no channel should be neglected, if it be not too exclusively relied on. Abernethy amused himself at one period in examining ultimate structure by the microscope; but he seems to have had but a very measured reliance on this mode of investigation.

Judicious nomenclature is of immense importance in the framework of science, and a want of care in this has probably done as much as anything to impede the course of rational investigation. There is nothing, perhaps, in the whole range of science more to be lamented than many—indeed, I might say all—parts of medical nomenclature. If our ignorance prevents us from giving a name to a thing which is descriptive of its nature, we might easily avoid applying such as are calculated to mislead. We can imagine the confusion which would result from a druggist labelling a bottle of water, "poison;" and a vessel containing poison, "water;" yet we doubt whether he would more imperfectly express the true relations of these fluids, than the terms "fever" and "inflammation" do the real nature of the conditions which they are employed to designate.

Abernethy's arrangement of tumours not only illustrates his disposition to seize on the more salient points of a subject, but also his inclination to seek for the essential relations of (so-called local) disease in the general condition of the body. He consistently, therefore, mentions them in an order founded on such relations. He places those first which he had found least dangerous in their nature, least destructive in their effects, and which appeared to him to have been attended by the least disturbance to the general economy. In like manner he placed those which had manifested more malignant or dangerous characters, in the order of their severity; inferring their characters respectively from the disturbance of the constitution, the resistance of the disease to treatment, and the variety of structures destroyed in its progress.

Between these two extremes, he placed, as the step of transition, that tumour which he had observed to partake most strongly of intermediate characters. But, besides the desire to throw some light on the subject of tumours generally, he had another special object in view. Few diseases exemplify the absence of scientific research more than tumours. In regard to most of these morbid depositions, it may be remarked that, even now, whenever a patient with one of these so-called tumours applies for advice, the practicability of removal is too often the only thing thought and it must be obvious to common sense that the mere cutting away of a deposition of this kind (however proper under some peculiar circumstances), can hardly ever exert any influence on the causes of its production. Indeed the manner in which these diseases are continually removed, without any previous inquiry that is really worthy of the name, is amongst the many grounds on which we found the opinion expressed in the sequel on the present state of medical surgery, as contrasted with that in which it was left by Abernethy. Now, while the gravity of the subject rendered the consideration of all tumours important, there was one which in an especial manner had eluded all efforts to expose its nature and dependencies—this was the justly-dreaded cancer. In regard to this, Mr. Abernethy hoped that further information might be obtained, by investigating other tumours more closely, and thus bringing, as he expresses it, collateral knowledge to bear on it, "like light shining from various places to illustrate the object of our researches."

Here was a suggestion in the true spirit of philosophical inquiry; whilst, in taking so simple a basis for the names of tumours, and then associating them in arrangement with their respective constitutional tendencies, he adopted the best mode of recording in a general sense their more important relations. But the fault lay in the suppressed premise that the *relations* of the so-called tumours were comprehended by a division which is not founded in nature. Nothing indeed can be more artificial than that division of diseases to which surgeons usually restrict the term tumour; a defect which besets all medical inquiries. The old division, in which all sorts of diseases were jumbled together under the general name of tumours, defective as it might be, was much more auspicious, had it ever been made the object of a really philosophical inquiry; because the very diversity of the phenomena they presented would, by the ordinary process of common sense or inductive reasoning, have only served to bring out their common characters—the most important first step in all investigations of this nature.

Had Mr. Abernethy extended that collateral view which he justly insists on, to *all sorts of new depositions,* instead of confining it to the so-called "tumours," he would have detected how artificial was the division, and taken it at its just value; he would have found that he had excluded circumstances which not only led to a much more intimate knowledge of the relations on which those so-called tumours depend, but which confer a power of demonstrating easily, and in a more particular manner, to the most ignorant or prejudiced, those relations to a disordered state of the body, of which, without such assistance, it required a mind no less penetrative and suggestive than Abernethy's to give even a general enunciation. This defect essentially consisted in the vice we have before alluded to, and is nothing else but a violation of one of the rules most insisted on by Lord Bacon*.

It proceeds, perhaps, from the habit of looking at subjects through a medium too exclusively anatomical, and by which even Mr. Hunter was sometimes, though exceptionally, hampered. Popularly, it was deducing conclusions from only a portion of the facts of the subject; but if Abernethy did not get the whole of the facts, and therefore missed some portion of the conclusions to be drawn from them, he at least avoided the error of inferring anything positive which the facts did not warrant. We hope, however, that the paper has been valuable, in enabling some of us to arrive at further views, which serve to confirm the truth and extend the application of those entertained by Abernethy.

Now, to put the whole thing popularly, and to direct the public view to the common sense of the matter, it is obvious that if we want to know the real nature of any growth whatever—say a tumour, a plant, or an animal—we cannot do this by any examination of its structure *alone*. If we desire to know its nature, we must also examine its habits, food, climate, and the various influences to which it is subjected. If, indeed, this were once done, then it is very possible, on again seeing the structure *merely*, we might recognize its real relations, although we might still be glad to have any well-known substance to which we could compare it, if only to *record* its identity. This is right enough, thus to *obtain* the general knowledge before we *assume* the particular. Again, suppose I had some ground growing all manner of plants, and twenty different sorts of fungi, what should I get by *merely* examining the fibres of one or the other?

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* That the nature of a thing is not to be sought only out of itself, but from things more in common.

But I should easily discover that some plants grew best in one soil, some in another, some with more moisture, some with less; whilst the very circumstances of soil, moisture, and so on, which were essential to some, might be enfeebling or destructive to others. No one will for a moment doubt that the kind of nutrition was of great importance in all, and this would necessarily lead me to infer that, " If I desired to get such a fungus, I must have more " moisture, less air, less heat or light, or another soil," and so on.

In a plant, you must also look to the roots and other parts of the organism. Now this is exactly what should be done in regard to tumours; and for no reason more cogent than that the great beauty and beneficent effects of Mr. Abernethy's views may become practically useful; for in the same manner that we would desire to influence the plant or the fungus through the sources whence it derives its nourishment, as air, water, various ingredients in the earth, and so on; so the only channels by which *we* can effect any influence, are those organs by which these matters are ultimately changed into the structures we wish to maintain, or we desire to get rid of, as the case may be. Now, although the number and relations of these organs may render the investigation more difficult in one case than in another, as they become more multiplied, or as the animal or vegetable is more or less simple or complicated in structure; yet, whether we take our example from man, or any other animal—or, in fact, any organized being of the countless modifications we find in nature—the instrumentality through which the vital power acts is neither more nor less than the assimilating organs.

If we have been too professional in this discussion, we plead, as an apology, that in no one point in the whole range of surgical practice would unnecessary suffering be avoided more frequently than on the subject before us; provided only that what is clear and positive, as distinguished from what is conventional and erroneous, were once popularly familiar; for, amongst other evils, most of the operations in this department of surgery are not only superfluous—to use no stronger term—but they practically *interfere more than any one thing whatever* with the progress of the scientific investigation of the nature of these maladies.

The removal of them by operation is too commonly undertaken, not only under circumstances which, as Abernethy said, "add cruelty to calamity," but for reasons which logically forbid such a proceeding; and although there are conditions which call for such interference, yet those under which it is usually instituted help only to obscure the real relations of the disease, and to throw the shadowy veil of an irrational empiricism over the operations of nature.

Those who recollect the remarkable results which Abernethy sometimes obtained in regard to this intractable and often formidable class of diseases, will, I think, be disposed to agree in thinking that few maladies are more open to improved investigation, or promise a more encouraging prospect of enlarging the boundaries of philosophical medicine.

SECTION.

HIS PAPER ON A CURIOUS CIRCUMSTANCE SOMETIMES FOLLOWING INJURY TO THE LUNGS.

Fractured ribs are common accidents, and illustrate very beautifully those conservative principles in animal bodies which give such interest to the study of their economy.

When first we consider that the ribs form the greater part of that box in which the lungs and heart are enclosed, and by which they are protected, we are disposed to regard a fracture of one or more ribs as a very serious affair.

Nevertheless, these accidents generally do extremely well. In the first place, the gristles, or cartilages as they are called, by which the ribs are attached to the sternum in front, give, in conjunction with the spine behind, considerable elasticity to the whole structure of the chest. Most injuries have therefore to overcome this elasticity, before anything gives way; and when the rib has done so, and is fractured, the resiliency of the cartilage or gristle to which it is attached *tends* to restore it to its place, or to set it, as we phrase it.

Another very curious thing in accidents is the instantaneity with which muscles which are *ordinarily* under the dominion of the will, become reluctant to obey it, or altogether repudiate its authority. In all fractures, of course, the most material thing is absolute repose; and there is very little chance of a man moving his rib when it is broken. He instinctively begins to expand his chest, for the admission of the necessary air, by other muscles, usually to the exclusion of those which are attached to the broken bone.

The Lung, which may be considered as a series of tubes, some conveying blood, and others air, is often wounded; but the blood immediately stops the leak, from its tendency to coagulate when out of the vessels; and no harm ensues. Occasionally, however, a circumstance occurs, which, until it is understood, appears curious and alarming. Either from the extent, the scratching of the surface, or some other peculiarity in the wound of the lung, the air escapes from it, and the patient is as it were blown up, as to the chest, neck, and face, by the air impelled from the lung beneath the skin into the connecting tissue, exactly in the same manner as the butcher does when he is preparing veal. This blowing-up is called, from the Greek word for it, *Emphysema;* and it was on this feature in these accidents that Mr. Abernethy wrote a short paper.

There is not much which is absolutely new in it. It is chiefly remarkable for the clear manner in which it places before us what is required, as distinguished from what is officious and unnecessary, and, in fact, reduces the treatment to that of ordinary cases, with one clearly defined modification.

He shows his familiarity with Pneumatics, so far as they are touched by the case, just as he does his knowledge of Chemistry elsewhere. The exceptional cases, in which the air is confined in the chest, the mode of procuring it an exit by operation, and the condition regulating this proceeding, are very simply and clearly laid down.

The paper also contains remarks on the collapse of the lungs when the chest is opened, and on certain exceptions which have been observed, which, from their general interest and suggestive character, will well repay an attentive perusal.

He next offers a few remarks on those mothers' marks, as they are popularly called, and which are technically styled nævi. They are generally little more than clusters of enlarged blood-vessels, and are usually removed by excision or other operative proceedings. As the essential character of these marks is increased action and size of vessels, Mr. Abernethy thought that, if well-regulated pressure were made on them so as to impede the flow of blood into them, and this were conjoined with Cold (which represses vascular action), many of them might be got rid of in this manner. He found his idea realized, and published three cases of its success. The value of these suggestions consists, first, in the opposition they offer, *pro tanto*, to that absurd tendency there is to remove everything like a tumour; and the impediment thence arising to any searching inquiry into the causes on which they depend.

But there is another inconvenience which occasionally renders the excision of these nævi very inadvisable. It sometimes happens that they are so situated that they cannot be removed, without making the disfigurement greater, or from some other still more serious objection; as, for example, when small ones occur in the face, or when they are placed near the eye. Under such circumstances, the contraction consequent on a wound of any extent is a serious inconvenience; in some of these cases, the adoption of Mr. Abernethy's plan allows us to dispense with the operation by excision, as I have myself experienced. As it illustrates the advantage of the plan in a case where it was particularly applicable, I will briefly refer to one example. A young lady had one of these marks at the root of the nose, where, from the position, as well as from the contiguity of the eyes, any dragging from the contraction of a scar, would have been particularly undesirable. She was brought from the country to have it removed; but, on representing the objections to that course, it was agreed to try Mr. Abernethy's plan, which was completely successful.

At this period, Mr. Abernethy published sundry other interesting papers, showing, in his observations of all that was passing around him, that his views were not less circumspect and comprehensive than they were clear. His "surgical cases" are all excellent; and if they do not contain so full an account (the great vice of medical records) of all the circumstances which preceded them, as are sufficient to furnish future investigators with the elements of accurate generalization, they are remarkably valuable for the qualities of clearness and candour.

We may have an opportunity of briefly alluding to some of these papers in our summary; but they are hardly practicable subjects for popular analysis, although they form some of the most valuable contributions to the practical literature of the profession. They show also that he was as penetrative and efficient in regard to the operative department of practice, as he was in those higher and more extended views, which, in enlarging the *science* of surgery, has tended to diminish, of course, the number of operations.

About the year 1785, John Hunter had invented his celebrated improvement in the treatment of a disease of the arteries called "Aneurism." It was a very simple deduction from observations on the state of the arteries; and although it was one of those inquiries which had been made the subject of experiments on living amimals, it was one on which *not the smallest light* had been thrown by such investigations.

Mr. Hunter had found that, in addition to many other serious objections to an operation which had been usually performed for the relief of this disease—which consists either of a giving way of a *portion,* or a general enlargement, of a vessel (for it is sometimes one, sometimes the other)—a great cause of failure had been, that the ligature which was placed round the artery was too near the disease, and, in fact, involved a portion of the tube which was unsound. He accordingly proposed tying the artery a little farther off, and thus substituted, for an operation which was extremely severe, very hazardous, and too commonly fatal, a comparatively short and simple proceeding, which, under *moderately favourable auspices,* is almost uniformly successful.

As with many other discoveries, accident and similarity of views had suggested similar proceedings to others, so that continental surgeons were disposed to dispute the merit of the discovery in favour of Guillemeau, Guattani, Anel, Desault, &c., as their views favoured one or other; but there can be no doubt that for the first clear exposition of the *principles* of the operation, as well as of the objects it was designed to accomplish, we are indebted to John Hunter.

John Hunter's operation applied to the main artery supplying the lower extremity, and surgeons have since extended the proceeding to many other arteries. The first extension of it, however, occurred to Mr. Abernethy, who, about this time (1797), placed a ligature on what is called the external iliac artery; and as he seldom touched anything which he did not improve, he made an important modification in the mode of proceeding.

Subsequent experience, it is true, has, in some measure, rendered that improvement no longer necessary; yet, whenever circumstances arise which lead to any material disturbance of the artery from its situation, we apprehend the caution of Abernethy in tying it in two places close to its connection with the surrounding parts, is a valuable condition.

He also sent, about this time, an ingenious paper to the Royal Society, on certain small openings into the cavities of the heart. They are called the "Foramina of Thebesius," from an anatomist who particularly described them. This is to us one of the prettiest of his physiological contributions. The facts are stated with great simplicity, their relations to disease beautifully pointed out, and the inference from the whole very striking, as being in harmony with the facts whence it is deduced. Abernethy's idea being, that the holes were for the purpose of obviating excessive repletion of the nutrient vessels of the heart, by allowing them to relieve themselves by pouring a portion of their blood through these holes into the general mass of the circulation. It could hardly, however, be made interesting to the general reader without going into the subject more than is suited to our present object.

In 1799, Abernethy's reputation had gone on rapidly increasing. His numerous pupils, too, had become the media for frequent consultations, in addition to those which arose from his own connection, and his reputation with the public.

He now moved from St. Mildred's Court, and took the house in Bedford Row. This was some time previous to October, 1799, the September of that year being the last time his name appears on the rate-book of St. Mildred's Court. He never again changed his professional residence. The move was an important step, but it was only the precursor to one still more interesting.

In the January of the following year, an event occurred which seldom fails to exert a greater influence on a man's future prospects and happiness than any other. This was no less than his marriage—of which we must say a few words in a separate chapter.

CHAPTER XIV.

HIS MARRIAGE.

"Ye solvers of enigmas—ye
Who deal in mystery—say,
What's cried about in London streets
And purchased every day?

"'Tis that which all, both great and small,
Are striving to obtain;
And yet, though common and quite cheap,
Is daily sought in vain."

OLD RIDDLE.

THERE are few subjects on which people are more agreed than the value of "good matches;" neither do they seem to differ very widely as to what that phrase is intended to convey. Not that everybody's *beau-idéal* implies identity of composition, but they are pretty well agreed as to the more essential elements.

But if we observe the different ways by which people seek to obtain a common object, we are puzzled to know how folks that set out in such various directions should ever arrive at the same point. The travellers are said, too, to provide themselves not unfrequently with various disguises; not only in dress and externals, but even in manners and sentiments, which they do not usually entertain. Thus we have heard of one who professed a great love of music, who scarcely had an idea of melody; of another who expressed an admiration of poets whom he had never read, or voted unmitigated bores. Others have been known to avow a perfect indifference to wealth, who have had scarcely an idea unmixed with an instinctive admiration of the *æs in presenti.*

We once heard a curious fellow say that he could marry any lady he liked, if he could only "bring himself to take the trouble;" and we thought how happy he would be if he could live on as good terms with his wife as he appeared to be on with himself. Some start with an apothegm which they carry about like an amulet or charm; such as, "No greater rogue than he who marries "only for money, and no greater fool than he who marries only "for love." Apothegms, however, like many things in this world—Macintoshes and umbrellas inclusive—are very apt to be left at home when most wanted.

We are not informed whether table-turning or mesmerism have yet discovered any prophylactics against the undoubted perils of an expedition in search of a partner.

We are unfortunately not sufficiently versed in these mysteries to know the "latest accounts;" but from the reputed effects of platinum and other metals, we should not be surprised to hear that a person well mesmerised would be found very clairvoyant of gold. We are not aware of the achievements necessary to arrive at the exalted position of "a Professor;" but it is said that "Professors" find gold without the necessity of going to the "diggings."

Table-turning, we hear, has not as yet been found successful. By shooting too much ahead of the slowly moving current of human affairs, it skipped over one generation, and thus recently entrapped an Irish gentleman of the "highest respectability" by giving a fortune to a lady too soon; it happening to be found still in possession of its "right owner"—or, as the technical phrase is, "in expectation."

Many aspirants for wedlock have sundry misgivings about certain traditionary repulsions which are said to exist between love and poverty, and, uninfluenced by the charms of matrimony, think only of the possible consequences. Not a few, however, regard marriage as too serious an affair for sport or speculation. They think it very difficult for mortals who know so little of themselves to know much about other people, and that though matches in rank and money are daily seen to be very practicable, yet that matches in mind are still as difficult as Dryden represented them—

> "Minds are so hardly match'd, that e'en the first,
> Though pair'd in Heaven, in Paradise were curs'd."

People of this sort contemplate marriage in a very unpoetical manner. They have great faith that correct intention and common sense are the best guides; and, although they may not feel less transported with their prospects than other people, they are apt to remember that it is "transportation for life."

A great deal has been said of the marriage of Abernethy, and very much of it in proof of his eccentricity of character; but if a steady reliance on earnestness, sincerity, and common sense, on an occasion on which one or other of these qualities are sometimes laid aside, and the employment of the highest qualities of the mind for the most important purposes be wise, we must, if we admit the eccentricity of Abernethy, concede to him the less-equivocal merit of practical wisdom. Himself a sensible and clever man, and a great admirer of these qualifications in others, he was not very likely to ally himself to any lady who appeared deficient in such characteristics.

Abernethy had a very quick perception of character, and his profession afforded him ample opportunities for the exercise and the cultivation of this faculty. He would not have been very likely to lay it aside on an occasion when a judicious and successful exercise of it, as distinguished from mere impulse or first impression, is of more consequence than on almost any other.

Miss Anne Threlfall was the daughter of a gentleman who had retired from business, and who it appears had been residing in the town of the far-famed Edmonton. This lady was intimate with the family of Mr. Hodgson, where Abernethy was also a frequent visitor.

It was at Mr. Hodgson's that Mr. Abernethy first made the acquaintance of her who was destined to exert so considerable an influence on his future happiness.

In the unrestrained intercourse of the society of intimate mutual friends, a man of Abernethy's penetration would not be long in discovering the amiable or the estimable qualities of an agreeable woman.

Mrs. Abernethy added to personal attractions of no common order, great good sense, and a very lively, ladylike manner. These had not been without their influence, on their first meeting; and a few additional interviews, which the usual precursor of an undefinable pleasure in her society served to accelerate, not only confirmed his first impressions, but seem to have deepened them into sentiments of warm respect and affection. Now, supposing his opinion formed, his resolution taken, there was still a difficulty—Abernethy was remarkably shy, and extremely sensitive.

His whole time was absorbed in teaching, studying, and practising his profession; his rising ambition just getting success within its grasp. How was resolution or opportunity to be found for the tardigrade, time-consuming process of a regular siege? Still, after all, the shyness was the real Rubicon which he felt a difficulty in passing. Common Sense said to a sensitive Conscience, "You are about to ask a lady to entrust to you her happiness for life." "Ah!" said Conscience, "that is indeed a great deal to ask of any one." And Shyness said it was equally difficult to know what to say, how to make the request, or brook a refusal. The difficulty with Abernethy was so great, that there is some reason to doubt whether he could have got over it, had he been left entirely to his own resources.

Mr. Hodgson, it seems, did not sympathize with Abernethy's scruples and difficulties, but simply encouraged him to overcome them. It is wonderful how even the greatest minds are influenced sometimes by a timely "pat on the back." We recollect a distinguished public man, and a peculiarly single-minded one too, once observing, that few people had any idea of the comfort which public men sometimes derived from any one, whom they imagined sincere, simply saying, "You were quite right, I think." Whatever Abernethy might, or might not, have owed to some little help of this kind, it is quite certain that he at last opened his heart to Miss Threlfall, or at least essayed so to do; but, apparently not very well assured that he had said what he intended *to say*, he supported it by a letter, which proved successful.

This letter is still extant, and an interesting document it is. It forms a curious commentary on the numerous and dissimilar versions which have been given of it by gossip; all the versions we ever heard having had the common character of being in every respect entirely unlike the original. Here it is:

"Tuesday.

"I have felt extremely anxious, dearest Lady, since I had the "pleasure to be with you, lest, from my embarrassment in deliver- "ing my sentiments, I might have said any thing liable to mis- "apprehension. This anxiety induces me to trouble you with "the present letter. I had designed, in our last conversation, to "have said, that I had ever regarded the marriage state as that "of the greatest happiness. It always appeared to me that two "persons of different sexes living together in reciprocal benevo- "lence were placed at the summit of human felicity. Hard ne- "cessity has, however, precluded me from the enjoyment of such "bliss; and when I had at length relinquished even the idea of "it, by accident I met with a lady in whom were concentred all "the qualities which I could have wished for in the moments of "fondest expectation, and from whom I was led to believe I "might derive what I had ever regarded as the greatest happiness. "This was to me one of those circumstances of the reality of "which the mind seems doubtful, from the excess of delight that "it occasions. I had wished, dearest Lady, at our last inter- "view, to have convinced you that I was capable of discerning "and loving you, as well for the perfections of your mind, as for "the charms of your person. I have ever been an enthusiastic "admirer of intellectual excellence; and in the minds of some "ladies whom I have known, I have distinguished a purity of "thought and benevolence of design which I have never found, "nor can I expect to find, amongst men. In addition to these "simple and fascinating qualities, I have witnessed a clearness of "perception and judgment, an undeviating rectitude of principle, "and, as the result of these and other qualities, such a dignity of "character, that I have looked up to the possessor of them as to "something divine. I had wished to have made you acquainted, "in some degree, with my own character, as far as I might have "been supposed to have acquired that most difficultly attained "information, a knowledge of myself. I perceive, however, an "impropriety in saying much upon this subject; but I wish you

"to be assured, that I am incapable of uttering any thing false
"or deceitful, and that consequently you may rely upon my word.
"I have pursued every object in life with an avidity which has
"appeared to many disproportionate to its value; but surely, if
"an object be worth attaining, neither diligence should be spared
"nor time lost in its attainment. How anxious and earnestly
"interested must a person of this disposition, with respect to sub-
"jects of little importance, feel when engaged in what he con-
"siders as the most important concern of his life. I shall suffer
"the greatest inquietude until I am assured of your good opinion.
"This letter has been written by snatches, in the midst of the
"avocations of this day, which now so call upon me, that I can
"only add (what I hope may be an unnecessary assurance) that
"I shall ever be, with the truest affection, and most faithfully
"yours. "JOHN ABERNETHY."

This beautiful letter is very characteristic. The simplicity and straightforwardness,—the respect and tenderness, "Dearest Lady,"—the brief, modest, but truthful tone in which he alludes to his own pretensions,—the plea for his earnestness deducible from his known character in ordinary pursuits,—his frank confession of anxiety and inquietude until he is assured of her "good opinion,"—and his naïveté in saying that his occupations oblige him to conclude,—all respectively sketch the natural warmth, tenderness, sincerity, and earnestness of his real disposition.

The marriage took place accordingly in the parish church of All Saints, Edmonton, on the 9th of January, 1800, and is thus entered in the Register:

"John Abernethy, Bachelor, of the Parish of St. Andrew's, Holborn, to "Anne Threlfall, of this Parish, Spinster, were married in this Church by "licence, the 9th day of January, 1800, by me,

"D. WARREN, *Vicar.*

"This marriage was solemnized between us:

"JOHN ABERNETHY.
"ANNE THRELFALL.

"In the presence of

"JONATHAN PATTEN.
"WILLIAM HODGSON.

"J. HODGSON.
"MARY THRELFALL.
"CHARLOTTE HODGSON."

By marriage Abernethy obtained a partner for life who to personal attractions added those social and moral excellences which combine to form a superior woman—one to whom such a man as Abernethy could, and always did, to his last moment, look up with equal respect and affection, as the wife, mother, and the friend. As a husband, there can be no doubt that, during the thirty years he lived after his marriage, his conduct was a practical commentary on, and fulfilment of, the preceding letter; and he endeavoured at all times to convey to the children the warm sentiments of respect for, and reliance on, their mother that he had seen so much reason himself to entertain. On the other hand, it is impossible to overrate the grateful warmth with which Mrs. Abernethy returned his affection, or the veneration and respect with which she honored his memory.

Few persons, if any, have experienced a longer period of uninterrupted happiness than that which followed the marriage of Abernethy. Mrs. Abernethy survived him twenty-four years, having died in July, 1854. She had for many years been afflicted with paralysis, which at times was attended with considerable suffering. It was consolatory, however, to feel that her faculties remained without being materially impaired to the last.

Mr. Abernethy had, in his last illness, repeatedly expressed his anxiety that every kindness and care should be shown towards her to whom he felt so much indebted; and he had prophetically suggested, as probable, what really happened. He said, " Take " every care of your dear mother. She may have many and per- " haps serious illnesses; but she will still be, most likely, a long- " lived woman." This legacy, we have reason to know, was most fully and kindly administered.

One circumstance, on the occasion of his marriage, is very characteristic of him: namely, his not allowing it to interrupt, even for a day, a duty with which he rarely suffered anything to interfere—we mean the lecture at the hospital.

Many years after this, I met him coming into the hospital one day, a little before two (the hour of lecture), and seeing him rather smartly dressed, with a white waistcoat, I said:

" You are very gay to-day, Sir."

"Ay," said he; "one of the girls was married this morning."

"Indeed, Sir!" I said. "You should have given yourself a "holiday on such an occasion, and not come down to lecture."

"Nay," returned he. "Egad! I came down to lecture the day I was married myself!"

On another occasion, I recollect his being sent for to a case just before lecture. The case was close in the neighbourhood, and it being a question of time, he hesitated a little; but being pressed to go, he started off. He had, however, hardly passed the gates of the hospital before the clock struck two, when, all at once, he said, "No, I'll be —— if I do!" and returned to the lecture-room.

CHAPTER XV.

OF ABERNETHY'S BOOK ON "THE CONSTITUTIONAL ORIGIN OF LOCAL DISEASES," OTHERWISE "MY BOOK."

> "From the barr'd Vizor of Antiquity
> Reflected shines the Eternal light of Truth,
> As from a mirror; all the means of action,
> The shapeless masses, the materials,
> Are everywhere around us. What we need
> Is the celestial fire, to change the flint
> Into transparent crystal, bright as fair."
>
> LONGFELLOW'S "SPANISH STUDENT."

In all that Abernethy had hitherto published, it was easy to perceive that, although he was carefully examining the prevailing opinions and practice of the day, he was emphatically one of those independent thinkers who had power to overlay the most established conventionalisms with opinions of his own. Although hitherto his publications had related to particular diseases or accidents which were held as within the ordinary province of the surgeon, he was shadowing forth *principles*—views which, if they were true, must necessarily have a much wider range of application than to the particular cases which it had been his object to consider. In 1804, he had sufficiently matured his general views to think it right to publish them; and this he did in his book on the "Constitutional Origin of Local Diseases," popularly known as the "My Book," to which he not unfrequently referred his patients for a more detailed account of his views, than he could find time to give in the consulting room. When we reflect that diseases consist entirely of altered conditions in the structure or function of some part of the body, a formal announcement that they must be greatly influenced by the organs on which *the whole body depends* for its nutrition, seems to have so much the aspect of an obvious truism, that we scarcely know whether most to wonder at so formal an announcement of it having been necessary, or the astonishing number and variety of the reservations with which it has been admitted.

But, strange as this may appear, and although all the facts have been before the eyes of man for ages—nay, though their relations have been *more or less felt* and acknowledged in cases usually submitted to the physician,—we venture to say that nothing like an attention at all adequate to their importance was obtained for them in the practice of physic, and scarcely any at all in surgery, *until the time of Abernethy.*

At the present time, a great deal has been done to establish, by the most clear and indisputable demonstration, the practical usefulness and necessity of the principles to which Abernethy conducted us, in the cure of diseases, whether medical or surgical. Still, these principles are much neglected, much misunderstood, or so *imperfectly carried out,* as to excite, even in many of the public, expressions of astonishment. It is, indeed, not too much to assert, that, even in those cases in which their successful application has been most incontestibly exemplified, his principles are *fully carried out on comparatively few occasions.*

The causes of all this are, we fear, too easily detected; the removal of them is indeed sufficiently difficult. We may possibly discuss both points in the sequel.

Instead of the exquisite simplicity and clearness of Abernethy's views, so far as he had gone, being carefully studied, and with a view to the *extension* of them beyond those limits which his time, his opportunities, and his caution had assigned to them; instead of examining into, and testing, the practical value of the deducible, and, in fact, necessary sequences, on views of which he had demonstrated the truth and value; practice appears to have taken a retrograde movement.

He who would advance even as far as Abernethy, is in danger of being regarded as crotchety or peculiar; whilst any who should strive by a more careful examination of his views to render their practical application more definite and analytical, must be prepared to be looked on simply as an enthusiast.

This has, indeed, been the case more or less in all sciences from the earliest times. The *facts* which conduct us to a true interpretation of the *laws* in obedience to which they occur, have been always before us; the very same facts on which, as Professor Whewell* observes, we have raised the stately structure of modern science. Butler† had before made a similar remark. Poets too, as even the motto to our chapter shows, have held the same sentiment; what everybody *knows*, how few *consider!* Neither Copernicus nor Galileo altered or invented *facts*. Those they *observed!* what they *discovered*, were conclusions interpreting the true relations of them. Bodies fell to the earth, and the crystal rain-drop had shown the composite nature of light in the beautiful colours and wonderful illustrations of the rainbow, ages before Newton discovered the true explanation of the one, and the great law exemplified in the other.

The object of "the Book" is to set forth the great fact of the reciprocal influence existing between the nervous system and the digestive organs, and the power they mutually exert in the causation and cure of diseases; and this, whether the diseases originate in disturbance *primarily* directed to the brain or any other portion of the nervous system, or to the *digestive organs;* whether the result of accident, such as mechanical injury, or other local manifestations more commonly termed disease. In the book before us we shall find an ample refutation of many misconstructions and misapprehensions of Abernethy's views; misconstructions which have tended to obscure principles, remarkable for their simplicity and truthfulness; to impede the beneficial application of them in a manner which has been equally injurious to the public and the profession, and which have impressed on mankind a very inadequate idea of the obligations due to the distinguished author. His views were said to be theoretical and exaggerated, whilst they were conclusions logically deduced from facts; and so far from the pervading power of the influences to which he proximately attributed the causation and cure of disease having been exaggerated, the onward study of his principles only serves, by the discovery of more multiplied and refined applications of them, to fill in with additional illustrations the accurate outline which he has so truthfully drawn. He never wrests a fact to a conclusion to which it does not legitimately lead. In virtue of that suggestive quality of his mind (so important an aid in philosophical inquiries), he occasionally, in all his writings, puts forth suppositions, but these only as *questions,* the next in the order of inquiry, and these he asks of nature alone.

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* "History of the Inductive Sciences." † Butler's "Analogy."

Mr. Hunter had been the first in this country to make the true use of anatomy; I mean in the sense that whilst it was no doubt the basis of our investigation into the functions or uses of parts, still it was only *one* of an extensive series of inquiries. He had *examined* the *dead* with no purpose more earnestly, than to assist him in his endeavours to *observe the living;* examined *parts,* that he might better understand the whole. He had made himself familiar with the economy of animals, and generally with the habits of organized beings, whether animal or vegetable, that he might know their relations to each other, and that of the *whole* to the phenomena, habits, and laws, of the *Human* economy. As he neglected no source whence it had been customary to seek for information, so, notwithstanding his fondness for animals, he made various experiments on living creatures. But whilst these experiments afford additional proofs of the poverty, so to speak, of this plan of investigation, they impress on us the truth of Sir Charles Bell's assertion, that physiology is essentially a science of *observation.* We have only to place Mr. Hunter's *observations* and *experiments* here referred to, in juxtaposition, in order to bring out in high relief the great meaning and value of the one, and the unnecessary, or inconclusive, character of the other. He also examined the various facts presented to him in the *living* body with unequalled patience and circumspection.

Amongst others, he had paid particular attention to those which exemplify that vivid, that watchful connection which exists between various parts and organs, and by which impressions or sensations excited in any one part are telegraphed, as it were, with the swiftness of lightning to any or all of the organs of the body; facts which may be observed by *anybody*, by no one better, and by few so well, *as patients* themselves. To take a common example: everybody is familiar with the fact that certain disturbances of the stomach produce pain or other annoyance in the head. Every one also knows that in such cases there is very often no pain, and sometimes no sensation of annoyance in the stomach; so that were it not from an innumerable succession of such conditions, in connection with particular influences on the stomach, we should, from the feeling of the *stomach only*, never dream of the cause being in that organ. Now on these simple facts hang not only the most practical of all John Hunter's observations, not only the most valuable of Mr. Abernethy's, but (as far as we can see) those relations through a philosophical examination of which we shall still most auspiciously seek to extend our practical knowledge of disease. We see here just that which Mr. Hunter had asserted—namely, "that the organ "*secondarily* affected (in this case, the head) sometimes appeared "to suffer more than the organ to which the disturbance *had first* "been directed."

He observed also that the connection thus manifested, existed equally between *all other parts* and organs; that although it might be exemplified in different forms, still the association it implied was indisputable. He adopted the usual terms by which these phenomena had been designated. Parts were said to *sympathize* with each other, and no term could be better, as it simply expressed the fact of associated disturbance or suffering. It is true the *facts* were not at all new; they had always existed; nay, they had been observed and commented on by many persons ever since the time of Hippocrates; and if I were to mention the whole of such facts, there is scarcely one which would not be to some one or other as familiar as a head-ache from disturbance of the stomach. Mr. Hunter, however, had a kind of instinctive idea of the yet unseen value of the clue thus afforded to the investigation of disease; and he observed these facts with a greater attention to all their details than any one, or all, who had preceded him.

Hunter's observations on the subject in his lectures were extremely numerous, and elaborate even to tediousness; Abernethy, who used to give us a very humorous description of some of the audiences of John Hunter on these occasions, was accustomed to say, "That the more humorous and lively part of the audience "would be tittering, the more sober and unexcitable quietly "dosing into a nap; whilst the studious and penetrative few "appeared to be seriously impressed with the value of Mr. "Hunter's observations and inquiries." Mr. Cline, an honoured name in our profession, and one who, had he lived in later times, would probably have been as distinguished in advancing science as he was for his practical excellence, significantly expressed his impressions of the future importance of the inquiries in which Hunter was engaged. Addressing Mr. Clift, after one of the lectures, he said:

"Ah! Mr. Clift, we must all go to school again."

Mr. Abernethy carefully treasured up and pondered on what he heard. He placed himself as much as he could near Mr. Hunter; took every pains, which his time and occupations allowed, thoroughly to understand him; and, with his characteristic tendency to simplification, said: "Well, what Mr. Hunter tells us, "resolves itself into this: *that the whole body sympathizes with "all its parts.*"

His perceptivity, naturally rapid, was evidently employed in observing the bearing of this axiom on the facts of disease. The digestive organs, which, if we extend the meaning to all those engaged in assimilating our food, compose nearly the whole viscera of the body, could not escape his attention, nor indeed fail to be regarded in all experimental investigations of any *one organ.* Accordingly, in his paper on the skin and lungs, we have seen a very important application of the relations between organs engaged in concurrent functions; we have placed before us the physiological evidences of their being engaged in a common function, and the sympathetic association it rendered necessary; whence he had observed relations of great moment, and pointed out the practical bearing they *must* have on Consumption. He had, however, been paying attention for some time to the digestive functions, when his intimate friend, Mr. Boodle, of Ongar in Essex, gave a fresh stimulus to his exertions. This gentleman requested him to investigate the functions and conditions of the liver in various nervous diseases, as also in certain affections of the lungs, which had appeared to him, Mr. Boodle, to originate in the former organ. Mr. Abernethy says: "I soon perceived "that the subject was of the hightest consequence in the practice "*of surgery;* for local diseases disturb the functions of the di- "gestive organs, and, conversely, a deranged state of those organs, "either occurring in consequence of such sympathy, or *existing* "*previously,* materially affects the progress of *local complaints.*"

At the very commencement, he hits on a great cause of evil, and boldly assails one of the most mischievous of all conventionalisms. "The division of medicine and surgery," he observes, "is mischievous, as directing the attention of the two orders of "practitioners too exclusively to the diseases usually allotted to "them." There is indeed no exaggerating the evils of that partial mode of investigation to which such a custom almost necessarily leads. We fall into error, not because of the difficulty of the subject, but because we never can, by looking *at one set of diseased processes only,* learn the whole of the facts belonging to the subject. It was just this that prevented Fordyce from arriving at correct views of fever. Nothing could be more excellent than the way he *began* to consider it; but he hardly begins, before he tells us that he intends to exclude those febrile affections which fall under the care of surgeons. In doing this, he at once abandoned a series of facts which are absolutely essential to the investigation. It must be obvious, on a moment's reflection, that, if a particular condition of a part have a relation to the whole body, the study of one without the other, or even if both be taken up by different persons, nothing but the most imperfect views can result. A jury, still more a judge, might in some cases guess from partial evidence the issue of a legal investigation; but who ever heard of either determining beforehand to examine a portion only of that evidence? Yet it is not too much to say, that hardly any legal question can be so recondite as many inquiries in physiology. The nature of the case is always more or less obscured by a number and variety of interfering circumstances. Diseases may be regarded, in fact, as nothing more than natural laws, developed under *more or less complicated circumstances of interference.*

Lord Bacon had warned all investigators of Nature of the danger of attending only to a portion of the facts; it had been one of the great bars to progress of knowledge in general. I regret to say that it still continues the bane of *almost all medical inquiries.*

Abernethy's inference in relation to this mutilated sort of investigation is too true, when he observes that "the connection "of all local diseases with the state of the constitution has ob"tained little notice;" whereas the truth is, that "no part of an "animal body can be considerably disordered without affecting "the whole system." Now here Mr. Abernethy claims—what? Simply this: he claims for *function*—that is, *the various offices fulfilled* by the several parts and organs of the body—that which Cuvier has so beautifully insisted on, and which our own Owen has so instructively exemplified in regard to *structure or formation;* namely, a *necessary relation* between the whole and all its parts.

In speaking of affections of the nervous system, Abernethy observes that the brain may be affected by the part injured, and that *then* it may affect the various organs by a "reflected" operation; but that whatever *may be the mode* (thus carefully separating the opinion from the fact), "the fact is indisputable." He adds that it may affect some organs more than others, and thus give a character or name to a disease. For example, it might affect the liver, we will say, when the name which would be given would probably be expressive of what was a secondary circumstance—namely, a disturbance of the liver. This does not so frequently happen, perhaps, nor so mischievously in relation to local injuries; but in other cases it is the cause of a great deal of erroneous and misleading nomenclature.

As we have seen, it often occurs that when the organs of the body are disordered, the more salient "symptoms," perhaps the *whole* of those *observed,* are referred to a secondarily affected organ, and the disease is named from that circumstance. The too frequent result is, that attention is exclusively directed to that organ, whilst the *cause*, being elsewhere, and where there *are no symptoms,* wholly escapes observation.

This is a very important branch of inquiry; and as it closely connects what Abernethy left us with what appears to us to be one of the next things to be clearly made out, we will endeavour to illustrate it.

Suppose a person meet with a severe injury, a cut, bruise, fracture, or any thing that we have seen a hundred times before, and, instead of being succeeded by the *usual* processes of repair, it be followed by some others: the simple expression of the fact is, that something has interfered with the *usual* mode and progress of repair; and as former experience has shown us that there was nothing in the nature of the injury to account for this, we are naturally led to look for the explanation of it in the state of the individual. But if the unusual appearance be one which we have agreed to call "Erysipelas," and we are accustomed to see long papers written upon this appearance as a *distinct disease,* we acquire a tendency, as every day's experience shows, to regard it as a kind of abstraction, or as an entity; something composed of precise and definite relations, contained in that particular description of case. Yet these relations may not be in any two successive cases exactly alike. Again, all of them may be subordinate to some more general character, probably a relation without which we cannot readily explain the phenomena; but at which we cannot arrive, because we have not comprehended a sufficient number of facts in our inquiry to include it.

"Erysipelas" is nothing more than a natural law obscured; because, as we have just hinted, it is developed under circumstances of interference (from disordered conditions of the economy) which distort the natural features of the law, modify its effects, or which may prevent altogether its full development. But now, if we study the means afforded by the various links *which other varieties of disease* furnish, the ascertainment of the real relations becomes comparatively *easy;* and we find that, whilst there are certain general relations which belong to all cases, there are certain others which may in a given number in succession be identical; or in no two exactly the same.

Partial investigations, leading, of course, to erroneous views, are sure to entail on us a defective nomenclature; and then the two do very materially contribute to continue the fallacies of each other. We may have an affection of a lung, perhaps; the cause may not be in the chest at all, although the lung may be inflamed or otherwise affected; but we call it Pneumonia, or Pleuritis, or some other name which *simply refers to what is happening to the part;* but all such names have reference only to effects; they are extremely defective therefore, as comprehending only a portion of the *nature,* and having no reference whatever to the *seat,* of the *cause* of the malady. The consequences of all this may not be *necessarily* mischievous; but they are so lamentably common, as to continue to form a very large share of the routine practice. The cause is elsewhere; but the remedies are directed to the chest—that is, they are, in such cases, applied to effects, not causes. If we must retain names so defective, it would be very practicable to combine them with something which should indicate that we had, at least, *looked* for the cause. This would, at all events, encourage a habit of looking beyond mere symptoms, and carry us at least one link higher up the chain of causation.

Abernethy, in demonstrating the connection between local disease, or injury, and general disturbance, judiciously takes cases where the relation was most unequivocal; that is, where the local disturbance consisted of a mechanical injury; such as in a gentleman who had undergone an operation—in another who had met with a bad fracture of his leg. In order to amplify his illustrations of the connection between the brain and all parts with the digestive organs, he draws them from all sorts of sources—from diseases the most severe and dangerous, as well as from affections which are regarded as most common or trivial—from the last stages of cancer and serious diseases of the loins, to the common disturbances of teething in children—sources which, from their apparent *dissimilarity,* confer, of course, the strongest force on testimony in *which they combine.*

His delineation of the features by which disorders of the digestive organs may be generally detected, is remarkably simple, clear, and truthful.

Every word has the inestimable value also of being alike intelligible to the public and the profession. His statement is interspersed with remarks of great value, which, we trust, have not passed away altogether unimproved: such as, that he had observed disorder of the digestive organs produce states of health "similar to those" said to be characteristic of the absorption of particular poisons—a most recondite subject; but one, the obscurity of which has entirely, as we think, resulted from the determination to regard the diseases to which it refers as *abstractions*, and to investigate them under the impenetrable shadow of *preconceived* opinions.

Almost all his remarks have received more or less confirmation from the experience of the whole civilized world. There are few things in his observations more interesting than the emphatic way in which they ignore the vulgar impression that he referred all diseases to the stomach. In the whole round of scientific literature, it would be difficult to find, in the same space, so complete or comprehensive a view of *all* those which we usually term the digestive organs.

Abernethy was very far from any such narrow views; whilst, in regard to other organs, to which some of our most distinguished men had paid particular attention, it is not too much to say, that, more clear and precise than Curry, and equally careful with Hunter, not less painstaking than our excellent Prout, he is more *practically* penetrating and comprehensive on this subject than any of them. But as to the charge of exclusive reference to the stomach, we shall easily see there was no foundation for it.

In speaking of the reciprocal affections of the brain and the digestive organs, he says: "The stomach is said to be chiefly "concerned in producing these effects; but the cause of the sym- "pathetic affection is probably more general." Page 48. He then goes on to exemplify causes acting on the *Liver*, and so forth. Page 49.

He distinctly contends that *other* of the chylopoetic organs may disturb the brain as well as the stomach. Again, at page

52, he repeats a similar opinion, and especially adds, that when the alimentary canal *is* affected, we can never be sure that it is *primarily so.*

He also says, at page 53, that, in some cases, the disorder of the digestive organs is dependent on disease of the brain.

I have alluded to these passages, because nothing is more unjust to Abernethy than to suppose that he attributed everything to the stomach, or restricted his attention to that or any other organ. Such a misapprehension also tends indefinitely to impede the practical application of his principles, and to deprive us of the advantages which are so constantly derivable from them.

This is so important, that it may be useful to consider a little the circumstances which may have thus misled the public, and we fear, not unfrequently, the profession also, in the interpretation of Abernethy's views.

In conducting the treatment of diseases of the digestive organs, whatever organ we may desire to influence, either by inducing tranquillity of the nervous system, or by the selection of food appropriate to the actual condition of the organ specially affected, the stomach is necessarily a primary consideration.

The reasons for this are sufficiently obvious, but have not perhaps been always adequately regarded. Digestion is, on the whole, a manufacture, so to speak, of a raw material (food) into a fluid (blood), which is to be absolutely adapted to purposes for which it is designed. This is effected not by one, but by several organs, which each produce their respective changes in the materials submitted to them. If we desire, therefore, to adapt the work to any organ which is engaged in this process, however remote it may be from the stomach, which, with the teeth and other auxiliaries, execute the *first* process in the manufacture, it is quite clear that we must begin with the *first process* to which we subject the said raw material or food. Say that in a machine for the manufacture of cloth the spinning apparatus were out of order, we must begin by giving out a less quantity of wool to the carding machine, or whatever represented the first process; because, having once delivered the wrong quantity or quality, we have no means of recalling it, and we should only still further derange the defective machinery.

So in the body; the liver, kidney, and other organs, not excepting the lungs and skin; their work must all bear relation to the quantity or quality of raw material, whether their function be the manufacture of the new product, or the rejection of that which is useless. So that supposing there were no other reason, no other than this mechanical relation (which is very far from the real state of the case), still we must *de facto* begin with the stomach, even where we entertain *no idea of any* special derangement of that organ. The stomach, however, is very important in another sense, and has a power of indicating the necessity of attention to those points which I have endeavoured to illustrate by the homely similitude of a manufacture.

Wherever impressions *first* act on the body, nature has placed a most vigilant guard. This is variously managed in different cases; the result is the same, and, as it would appear, the final cause also. In the eye, there is the most beautiful contrivance for moderating the ingress of light, as also any abrupt increase of intensity. Fringed curtains are provided which can close with electrical celerity. Again, the aperture by which light is finally admitted into the eye is vividly contractile or expansive, as the occasion may require; then again there are various media of different densities, through the influence of which even the velocity of light undergoes practical retardation by repeated refractions; and lastly, there are powers of sensual adaptation in the nerve with which the light is ultimately brought in contact, more wonderful than all.

The ear, being likewise a portal for external impressions, is guarded with equal care. Not a single vibration of air can ever reach the nerve of the ear with the crude intensity (if I may use the expression) with which it is generated. Passing over preliminary apparatus, by which the vibrations of air are first collected, the impressions of sound are first received on the parchment of a little drum, which parchment can be relaxed or tightened with the quickness of thought, so as to modify the force of the im-

impression. This impression is then, by means of a little chain of bones, conveyed across the drum, which is filled with air. It then reaches a portion of the ear in which are found very curious cavities and canals, of various forms, and taking different directions, and which, from the curious and complex arrangement of the whole, is not inappropriately called the labyrinth. This is the mysterious seat of those nerves which convey impressions to the brain. There is, however, here, an arrangement more exquisite than any we have yet mentioned.

In these cavities and canals, which are themselves so small as to be not unfit objects for magnifying glasses, there are corresponding delicate sacs and tubes, and these are filled with a limpid fluid. On this delicate apparatus, so exquisitely calculated to modify any undue force of impression, the sensitive extremities of the auditory nerves are spread out, which convey impressions to the brain. We see, therefore, how carefully these portals of the body are guarded; arrangements equally conservative prevail throughout. We might show a similarly exquisite arrangement in the laws governing the mind; but that is not our present object. We have seen hitherto that, beautiful as the arrangement is for securing us against painful impressions, it has been in a great degree mechanical.

The stomach, however, is the portal to a vast series of important organs, and is protected by a phalanx of sentinels, endowed with powers proportioned to the importance of the organ which they guard. There is little that falls within any idea which we can express by the term mechanical; everything is subjected to an examination essentially sentient; to powers residing in the nerves; the *laws* and *operations* of which, we can with proper attention trace out, but which exhibit powers demonstrative of an intensity and refinement of which our limited perceptions scarcely enable us to form a definite idea.

First, there is the olfactory nerve, between which and the stomach there is the most vivid sympathy.

Until our tastes become vitiated, the stomach seldom admits anything of which the nose reports unfavourably. The sense of smell, even in the somewhat measured power possessed by man, is capable of detecting forms of matter so subtle as to be beyond our powers of imagination. Nothing which so plainly deals with "matter" impresses more strongly the immense range which must exist between the chemistry of life and that of the laboratory. We all know the extraordinary powers of musk. I have myself a small mass of odorous matter (a Goa ball) which, from the circumstances under which it came into my possession, must have been emitting the odour for little less than a century. It has been exposed to air, is covered by a film of gold (I believe), is in no respect visibly changed, and for the last thirty years not detectably in weight; yet at this moment it emits as strong an odour of musk as ever. How exquisitely subtle must be the matter thus emitted; or how still more wonderful if it merely so modifies the atoms of air in its neighbourhood as to produce odour. We have no intellectual powers which enable us to realize a conception of such infinite tenuity of matter; yet the sense of smell instantly detects its presence.

Next come the nerves of the tongue; and here again, in natural conditions, there is a constant harmony between them and the stomach—that to which the taste readily gives admission being, in *undisturbed* conditions of the economy, some guarantee that it is innoxious; but what these *functions are to the stomach,* the stomach is *to the other organs.* In the first place, in natural conditions it usually at once rejects any noxious material which, from being disguised, or from any other circumstances, may have eluded the vigilance of the sentinels I have mentioned; but it has a vivid sympathy with every organ in the body. If anything deleterious be once admitted, it has to go through various processes, which may render it a source of indefinite disturbance; therefore, if any organ in the series of the blood-manufacture be materially disturbed—that is, so as to be disabled—the stomach usually refuses food; because there is no other way of stopping the mischief. Illustrations of this occur in many disorders of the kidney, in many affections of the alimentary canal, as also of the liver, and other parts.

No doubt the stomach is therefore a most important organ; but to suppose that it is therefore always the seat of disorder, is not only a most mischievous error, but a complete blind to its most beautiful and instructive relations; and as opposite to Mr. Abernethy's views as the most narrow can be to the most comprehensive. Proceeding with his illustrations, Mr. Abernethy cites a number of most instructive cases, such as palsy and other affections of most serious character, which too often result either from organic disease of some organ, or from mechanical pressure on the brain or spinal marrow, but which in the cases cited depend on disorder of the digestive organs.

It is impossible to exaggerate the interest or importance of these cases; not only from the fact that they almost certainly would have led to organic disease, but also for the value of that practical discrimination which they exemplify. Again, the very treatment which would have been proper, which had sometimes been begun, and which was not inappropriate to cases of *organic* disease, with which the symptoms were in part identical, would have inevitably, in the cases in question, only served to exasperate the very conditions they were designed to relieve, and to hasten those processes against which they were intended to guard.

No one can understand the force of these cases, without recollecting the intense difficulty of ascertaining that point at which disorder ceases to be merely functional, and at which organic disease begins. This is of all things the most difficult to determine in the whole circle of physiological or pathological inquiry.

The *symptoms alone* are absolutely useless in any case of real difficulty. Of that Abernethy was well aware, and he did much to guard us against the error into which a reliance on them was calculated to lead. He knew that organs which were diseased would sometimes afford indications not distinguishable from those of health; and that, conversely, organs essentially sound would sometimes only afford those signs which were indicative of disorder. We have, we trust, made some little progress in this very difficult branch of inquiry; and although it is true that organic disease not unfrequently escapes detection during life, yet, so far as we have observed, it is only in those cases in which there is, notwithstanding the daily lessons of experience, an *improper reliance* on what are called the symptoms. We assert, without the least hesitation, that organic diseases should seldom elude detection where the investigation is sufficiently comprehensive; but it must include *all the facts* of the case, the early history, and such circumstances which, however remote, have been over and over again proved to be capable of exerting an influence on the body; an investigation which, however vainly pleaded for in medical science, however regarded as too exacting, involves nothing more in principle than is required as a matter of course *in all other* scientific investigations.

When these conditions are observed, it is very rarely that we cannot detect organic affections in organs in which there may be no *present* symptoms. In relation to the *extent* to which they may be affected, it is true we have yet much to learn; still, if cases be judged of not by the history *merely*, nor by the symptoms *merely*, but by both in conjunction, and if to these be added a careful observation of the *amount* of work that the organs are separately or collectively doing, as *compared with their natural proportions;* together with a careful estimate of that which the actions of any visible disease may be eliminating from the body; then, indeed, we have good ground for hope that means will be opened to us of distinguishing more accurately various states of the system; and additional principles and powers disclosed of readjusting the disturbed balance of the various functions, which is the essential element of disease.

CHAPTER XVI.

"MY BOOK" CONTINUED.

"La première chose qui s'offre à l'Homme quand il se regarde, c'est son "corps. Mais pour comprendre ce qu'elle est, il faut qu'il la compare avec tout "ce qui est au-dessus de lui, et tout ce qui est au-dessous, afin de reconnoître "ses justes bornes."—PASCAL, PENSÉES, NATURE DES HOMMES, vol. ii, p. 57.

ABERNETHY, in impressing any anatomical fact, would sometimes say that we carried about with us in our own bodies excellent means of refreshing our impressions on many points of anatomy; but we may say this in a much more extensive sense with regard to the interpretation of that for which anatomy is alone useful—namely, the *uses* or *functions* of the body. It would be very possible for any observant person, who was moderately versed in the ordinary principles of correct reasoning, to detect many defects in medical investigations and practice; in the correction of which many of Abernethy's practical contributions consisted; but the mind, restlessly impatient to arrive at conclusions, often overlooks the most important facts, and deduces inferences *directly* from the evidence of the eye or other senses, without submitting it to such test as the intellectual faculty can alone supply. Nothing can exceed the mischief of this in serious matters, nor the absurdity of it, when we *think awhile.*

We should hardly refrain from laughter if we saw a man try to see with the point of his nose, or endeavour to examine the odour of a rose by his ear, or to listen with his eye; yet this is not a whit more absurd than to try to deduce conclusions from the impressions furnished by the eye, which can alone be afforded by the rational faculty. Nothing is more common than this sort of fallacy, nothing more easy than its correction; but then people must bestow at least a little of that time on their highest faculties which they so lavishly expend on inferior powers. How much time we consume, for example, in the study of various languages—those instruments for the communication of ideas—as compared with that bestowed on the collecting and marshalling of ideas themselves; which is little better than grasping at the shadow, and losing the substance; or, to use a humorous illustration, like a friend of our own, who, having a new dog, sent his servant forthwith to purchase sundry articles for him, in the shape of kennel, chains, engraved collars and food; all of which, at some expense, he safely accomplished to his master's satisfaction, expressing his sorrow at the same time for having accidentally lost the dog!

It is curious, however, to observe how the real business of the human mind is shadowed forth in the very abuses of its powers; nothing so bad but it is charged with a certain quantity of good; no error so great but carries with it the element of its own correction. The mind in its greatest aberrations is followed by the shadow of its real duty, which as it were waits on the time when clearer views shall burst on it. Nothing shows the real tendencies of mind more than its restless desire to arrive at *some* conclusion, *some* tangible evidence of its highest functions. It is the impulse of this instinct—the ungoverned abuse of a high faculty, impatient for illegitimate fruition—which lies at the bottom of much false reasoning, and which blinds men, even of great power, to obstacles which are luminously evident to the most ordinary capacity. Important as the next series of illustrations cited by Abernethy are, the conclusions he deduced from them were the necessary sequences of clear and correct reasoning on familiar and established facts.

The illustrations in question were those afforded by various cases of injuries of the head, in which certain consequences, however exceptional they may be, are too commonly referred to the abstract nature of the injury. We *see* that a man has a blow, we *see* that he does not recover in the usual way in which we have known many others to recover; but we do not, perhaps, *consider* that if a similar—nay, perhaps an identical force produces very different effects in different cases, the cause will probably not be in the nature or direction of the force so much as the condition of the body. Now the value of these cases of Abernethy's consists, first, in impressing the influence of this condition as modifying—in other words, *sustaining*—the disturbance consequent on injuries (in their origin) purely mechanical; and secondly, in showing that, in the cases in question, *that condition* depended on a disordered state of the digestive organs. We hardly know any cases more valuable than those in question. When a patient receives a blow, and, the *immediate* consequences having subsided, there still remains an impairment of sense or motion, the most usual thing, and no doubt very often the true view, is to refer it all to lesion of nervous structure. It is therefore of the highest consequence to know the facts of these cases. They not only prevent the hasty institution of treatment which would be injurious; not only secure the patient from being abandoned in despair; but supply at the same time the clues to a rational treatment, and the hope of a favourable issue.

There can now be few observant surgeons who have not met with cases in illustration of these circumstances; and yet I know not to whom the perusal of Mr. Abernethy's cases might not be useful. It is not without regret that I forego transcribing at least one of them; forgetful how impossible it is to do Abernethy full justice in a work intended for all readers. In his "Book," the cases in question begin at page 97, and occupy but a few pages.

The next class of cases, from which Abernethy illustrates the prevailing influence of the digestive organs, receives additional importance from the *imperfect* manner in which the phenomena have been interpreted in a vast variety of diseases; like small-pox and others, ascribed to the action of particular poisons. We may possibly have an opportunity of saying something more on this subject; but we may remark that when any disease has been presented to the physician or surgeon, supposed to be the result of specific poisons, it is just the last case in which any special attention is paid to the digestive organs. Now Abernethy observed that disorders of the digestive organs would sometimes *produce* diseases resembling maladies said to result from specific poisons. This is about the first indication or hint of that which, duly carried out by an advancing science, will, we trust, ere long, demonstrate what to *us* has long appeared only part of a general law. Of this we may by and by say a little more, when we endeavour to show the small quantity of truth which there is mixed with some of the prevailing errors; and how their occasional success results from blundering, as it were, on small portions of the principles enunciated by Abernethy.

In the meantime, we may refer to the illustration afforded by small-pox of the remarkable influence of the digestive organs in diseases called specific. We adduce this, because it is one which is popularly familiar, and a disease that, had it been studied under any but one particular phase, would have proved, of all others, the most instructive. There is no malady, under certain circumstances, more extensively fatal.

In the Spanish conquest in America—a history scarcely less interesting in a medical than in a moral point of view—it seems that not all the cruelties of the Spaniards were more destructive than the small-pox. In less than a century after the arrival of Columbus, it was computed that it had destroyed more than half the population; and in one year (1590), it so spread along the coast of Peru, that it swept away nearly the whole of the Indians, the Mulattoes, and the Mestichos, in the cities of Potosi and De la Hay*.

As is well known, before the discovery of vaccination, persons were *inoculated* with the small-pox, because it was found that the disease could *be thus rendered* comparatively harmless; whilst, if it was taken naturally, as it was termed, it was always serious, and too frequently extremely fatal. The preparation for inoculation consisted of *measures addressed to the digestive organs.* Now the effect may be judged of by this fact: Inoculation was at first violently opposed; and, in reply to the alleged safety of it, an opponent wrote to prove that *one* in *one* hundred and eighty-two had died of it. I wish we could say so of many other diseases.

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* Clench's History. Letter from Ch. Uslano, to Gonsalvo de Solano, July, 1590.

That such persons had, nevertheless, the genuine malady, was proved by the fact they were capable of infecting others (unprepared) with the disease in its most malignant form. But our notions of the mode in which the laws of the animal economy deal with injurious influences of this kind, are mischievously conventional. What quantities, for example, of mercury, in its different forms, have been administered in almost all diseases; and yet unquestionably there is a great deal of false reasoning in regard to this poison. Effects are attributed to it *as mercury,* which only belong to it in *its general character of an injurious agent.* All the (so-called) specific effects of it, most of which are become popularly familiar, may occur without any mercury at all. We have seen them induced by aloes, by scammony; and in a case where no medicine had been given, and where the only detectable poison was one which was to be sure bad enough, an enormously loaded liver.

We are obliged to say but little here in connection with this subject. Abernethy's cases were very important in relation to the influence of the digestive organs, although he did not see the generalization to which, as it appears to us, they help to conduct the pathologist. The subject is too extensive for discussion here. We will attempt something of a popular view of it, when we endeavour to explain the fallacy to which we have already referred.

Abernethy next adduces various illustrations from cases of other diseases; as indurations, tumours, carbuncles, scrofulous affections, and others; in proof of the dependence of a "numerous and dissimilar progeny" of so-called local diseases, on that "fruitful parent," disorder of the digestive organs. Of one of the most interesting and remarkable cases of tumour, Mr. Abernethy did not live to see the termination. It was of a lady who consulted him previous to the proposed infliction of an operation. She had been recommended by my father, in the country, to consult Abernethy before submitting to it; because he disapproved of it, as did Abernethy—not because they doubted of the nature of the disease, but because it was not confined to the part on which it was proposed to operate.

The lady used to call on Abernethy when she came to town; and after his death she came to me—as she said, just to report her condition. She had at times various disturbances of her digestive organs; but always from some imprudence; for, although habitually very simple in her habits, she would be sometimes careless or forgetful.

She died at a very advanced age—between seventy and eighty—but there had been no return of the disease for which she had originally consulted Abernethy, nor had she undergone any operation. It is a significant circumstance, too, that she had a sister who died of cancer.

The whole of the cases are, however, scarcely less valuable. In the fifth section, he treats of disorders of parts having continuity of surface with the alimentary canal, certain affections of the nose, of the eye, and of the gullet or œsophagus. His observations on the latter are especially valuable. They strike at that meddling practice which is too common in the treatment of diseases of these parts. Many of us have recommended a practice which, without neglecting either, relies *less* on manipulatory proceedings, and more on measures directed to the general health, in such cases; as producing effects which are not to be obtained by other means; but, if we are to judge from the medical periodicals, without much success; so inveterate is the habit of imagining that, whatever the causes of disease may be, if the *results* be but *mechanical*, mechanical means can alone be applicable. Public attention, and the perusal of such cases as those of Abernethy, can alone correct these errors.

Lastly, he describes the results of his dissections as bearing on the whole subject. Here he shows, that whilst disordered function may take place coincidentally with, or as a consequence of, change of structure, yet that such change, so *as to afford visible or detectable departures* from natural appearances, is by no means necessary, in *organs which, during life,* had afforded the most incontrovertible evidence of impaired function. He also shows that disease has *terminated* in *disorder* which had its original seat in the digestive organs. And again—that, in cases where the cause of death had been in the abrogated *function* of the brain, he found no actual *disease* in that organ, but in the *abdominal viscera.* He very justly observes that the conclusions he has drawn can be *neither* ascertained nor disproved by anatomical evidence *alone.* He mentions especially, and illustrates by a remarkably successful case, how *diseases of the lungs* may be engendered by disorders of the digestive organs, and *entirely* subdued by correction of that disorder.

He speaks also suggestively of the possibility of that which is certainly now an established fact. He says: "In cases of dis-"eased lungs, where no disease of the digestive organs is dis-"covered, yet considerable *disorder* does exist, and may continue "for many years without any *organic* disease being *apparent;* it "is possible that such disorder may excite disease of the lungs, "and thus produce a *severer* disease of the latter organs than "what existed in the former. Accurate attention to the *digestive* "*organs may determine this important subject, and lead to the* "*prevention and cure of the sympathetic diseases which I have* "*mentioned.*" "This attention must not be merely of that gene-"ral kind which adverts only to the quality of the ingesta, &c., "but one which more strictly observes whether the viscera" (that is, reader, not merely the stomach, not merely the digestive organs, but the whole viscera of the body) "and whether these "secretions are healthy or otherwise." After speaking of the heart also, as affected by the digestive organs; and of the infinity of diseases which arise from the reciprocal disturbance excited between them and the brain;—he says: "But even these are not "the worst consequences. The disorder of the sensorium, excited "and aggravated (by the means which he has described), affects "the mind. The operations of the intellect become enfeebled, "perplexed, and perverted; the temper and disposition, irritable, "unbenevolent, and desponding. The moral character and con-"duct appears even to be liable to be affected by these circum-"stances. The individual in this case is not the only sufferer, "but the evil extends to his connections and to society. The "subject, therefore, appears to me to be of such importance, that "no apology need be offered for this imperfect attempt to place it "under general contemplation." Here is that suggestion which, when carried out, leads to the detection of cases of insanity which depend on disturbances of the digestive organs.

Lastly, as if, notwithstanding his own previous attention to the important question of the influence of the digestive organs in disease, he felt that the inquiry had grown upon him in consequence of Mr. Boodle's endeavour to concentrate his attention to the subject, he concludes by expressing his past obligations to Mr. Boodle; for he says, with admirable modesty and candour, "for Mr. Boodle first instructed me how to detect disorders of "the digestive organs, *when their local symptoms were so trivial "as to be unnoticed* by the patient." He urges Mr. Boodle to publish also his own observations on the subject, because any remarks from one who observes the progress of disease "with "such sagacity and accuracy, cannot but be interesting." We are quite aware how feeble our attempt has been to do justice to this admirable book. But nothing can do that but a careful study of the various principles which it either suggests, dimly shadows forth, or deeply and beautifully unfolds.

Through not a very short life, we have had ample opportunity of testing these principles by the bed-side, and of endeavouring to connect some of them with the laws in obedience to which they occur; and we are free to declare our impression that when the book is studied with the requisite previous knowledge, and freedom from preconceived opinion; and when tested and carried out in *principle,* as distinguished from any adhesion to mere matters of *detail;* we think it infinitely more valuable than all other professional works whatever. In examining the truths it unfolds, or in our humble endeavours elsewhere at a more analytical or extended application of them, like Abernethy, we have rested our reasoning wholly on facts and observations which are acknowledged and indisputable.

Whilst other views have only led to a practice in the highest degree empirical, or, what is worse, conjectural, those of Abernethy's lead often directly, but always *when duly studied,* to a practice at once clear, definite, and in the sense in which we shall qualify the word "positive,"—that is, one which gives us the power (when we really have the management of the case) of predicting the success or failure; which is at least a ripple indicative of a coming science.

In order, however, to carry out this clearly, we shall at once add what we think necessary to the profession and the public on the subject. The *general relation* of Abernethy's labours to a real and definite science will be better developed in our concluding Summary; when we may have an opportunity of stating what further appears to have been done, and what is yet required. It will have been perhaps already observed that Abernethy's views involve a few very simple propositions: first, that disturbance of a *part* is competent to disturb the whole system; and conversely, that disturbance of the *whole system* is competent to disturb any *part*. That the disturbance may *commence* in the brain or nervous system, may then disturb the various organs, and that these may again by reflected action disturb the brain, and so reciprocally; and that in all these cases tranquillity of the digestive organs is of the very first consequence; not merely from its abstract importance, but from the influence it exerts on the state of the nervous system.

With respect to any influences immediately directed to the nervous system, these we apprehend to be few and simple; some kinds of medicine, are, no doubt, in particular cases useful, none are susceptible of *general* application. None of them are *certain;* and sedatives of all kinds, which appear to have the most direct influence on the nervous system, either require to be employed with the utmost caution, or are in the highest degree objectionable. But there are other *direct* influences, certainly; and very important they are. Quiet, avoidance of disturbing external impressions, whether of light, sound, temperature, &c. whether in fact of mind or body; but, in the majority of mankind, how few of them we can, in a strictly philosophical sense, command. We are therefore driven to other sources of disturbance; and in the digestive organs we find those on which we can exert great influence, and in which tranquillity, however procured or under whatever circumstances, is *certain, pro tanto,* to relieve the whole system. This Abernethy attempted, and with a success which was remarkable in no cases more than those which had resisted all more ordinary modes of proceeding; by general measures, by simplicity of diet, by occasional solicitation of this or that organ, by air and exercise, and measures which were directed to the general health. No doubt in some cases he failed, and so we shall in many; but let us look boldly at the cause, and see whether we do not fail a great deal more from our own ignorance than from any natural impossibility.

To examine the question, we must for the moment forget our admiration of Abernethy; be no longer dazzled by his genius, but look only to our duty; endeavour to discover his defects, or rather those of the state of the question when he left us, and see what further investigation has afforded in aid of supplying them.

In the first place, we must examine a little further that proposition which we have seen both in Hunter and Abernethy under different forms. Hunter says the disturbance of the organ sympathizing is sometimes more prominent than that of the organ with which it sympathizes. Abernethy says that the organ primarily affected is sometimes very little apparently disturbed, or not even perceptibly so.

Now, from both these statements, we find that there may be no signs in the primarily affected organ; which, practically rendered, is nothing more or less than saying that in many cases we must not seek for the primarily affected organ where *the symptoms are;* and this is a great fact: because, although it does not necessarily teach us what we must do, it exposes the broken reed on which so many rely. Now the further point, which, as we would contend, time and labour have supplied, is first this—that what Hunter had mentioned as one feature in the history of the sympathies of different organs, and Abernethy as an occasional or not unfrequent occurrence, is, in disorders of any standing, and with the exception of mechanical injury, *in fact the rule*—the *symptoms* of disorder being almost *never* in the primary organ; nay, even organic change (disease) is for the *most part* first seen in a *secondarily* affected organ. In regard to primarily affected parts, the skin only excepted, they will be found, in the vast majority of cases, to be one or other of the digestive organs.

I will endeavour to render the cause of this intelligible. A minute examination of what happens in a living person, especially if it be extended to some thousands of cases, will soon disclose to the most unlettered person a few instructive facts, showing that Nature has a regular plan of dealing with *all* injurious influences, which, however *various* many of the *details* may be, is in general character exquisitely simple, surprisingly beautiful, and intelligibly conservative; and that the various modes on which she exercises this plan, from the cradle to the grave, are, in *frequency, directly in the order of their conservative tendency.* Let us explain. There is no dearth of illustration; the *facts* are bewilderingly abundant; the difficulty is which to choose, and how to give them an intelligible *general expression.* Let us take a single case. We know that if a mote gets into the eye, there is irritation, immediately there is flow of blood to the part, a gland pours forth an abundant supply of tears, and the substance is probably washed out. Very well; we say that is intelligible. But suppose you have the vapour of turpentine, or any other irritant, the same thing happens; but still you cannot give quite the same *mechanical* explanation.

Again—substances which affect the mouth, nose, and stomach, will irritate the eye without any contact, and cause a flow of tears.

Lastly, you know that affections of the mind will do this, and where even we have no *mechanical* irritant at all.

In *all* these cases there has been activity of the vessels of the eye, and in all it has been relieved by secretion. Now this is the universal mode throughout the body; all irritation of the organs is attended by secretion; and where this is done, there is no disorder; or rather, the disorder is relieved: but if organs are irritated *continuously,* another thing happens, and that is, that an organ becomes unable to secrete constantly more than is natural, and then *some other* organ, less irritated in the commencement, takes on an additional duty—that is, the duty of the animal economy is *still done,* but *not equally* distributed.

This is the state in which most people are in crowded cities, and who live in the ordinary luxury or the ordinary habits of civilized society, according to the section to which they may belong. It is easy, in such cases, to detect those differences which distinguish this state from what is called condition or perfect health, as we have elsewhere shown*.

But of course there is *a limit to this power* in organs of taking on additional or compensating actions; and when this limit is exceeded, then those actions are instituted which we call Disease. The site is *seldom found* to be that of the original disturbance; and usually for a very plain reason—because there it would be more dangerous, or fatal. It would be scarcely less serious in many cases, even though placed on organs *secondarily* affected; and therefore it is more usually determined *to the surface* of the body; where, taking them simply in the order of their greatest number, or frequency, we find the first class of diseased appearances, and which strikingly impress the real nature of *the law*. They are the most numerous, most obviously dependent on general disturbance, and most conservative, as being least fatal. Diseases of the skin are those to which we allude, and which, in the characters I have mentioned, exceed all other diseases.

Again—the next surface is that involution of the skin which covers the eye, and which lines the mouth, throat, and the whole of the interior surface of the respiratory tubes and the digestive organs. Here again we find the *next* seat of greatest frequency, and the conservative tendency, to coincide. We need only refer to the comparative frequency of what are called colds, ordinary sore throat, and so forth; as contrasted with those more serious diseases which occur in the corresponding surfaces of the respiratory organs and alimentary canal. In tracing diseases onwards in the order of their number, we never lose sight of this conservative tendency. When *organs* become involved in disease, we find that, for once that the *substance* of the organ is so *affected*, the *membrane covering* it is affected a hundred, perhaps a thousand times. This is equally observable with respect to the brain, heart, lungs, digestive organs, and some other parts; and it is of great importance practically to know how readily affections are transferred from the *lining* of the alimentary canal and other parts to the membrane *covering* it, rather than to the intermediate texture of the organ; again impressing, though now in a dangerous type truly, the conservative *tendency* of the law.

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* "Health and Disease." See Treatise on Tumours.

Finally, then, we arrive at diseases of Organs; and here we see this conservative tendency still typed in the site first chosen, which is almost always (where we can distinguish the two structures) not so much in the *actual tissue* of the organ as in that which connects it together—what we term the *cellular tissue.*

This is remarkable in the lungs; where tubercular deposits are first seated; not in the essential structures of the organs, but in those by which they are joined together. All those various depositions also which are called tumours, generally begin in, and are frequently confined to, the *cellular tissue;* and even though there is, in certain malignant forms of tumour, a disposition to locate themselves *in* organs, there is a very curious tendency towards such, as may have *already fulfilled* their purposes in the animal economy.

We might multiply these illustrations to a tedious extent. We might show, for example, in the eye, how curiously the greatest number of diseases in that organ are placed in structures least dangerous to the organ; and even when the organ is spoiled, so to speak, how much more frequently this is in relation to its function as *an optical instrument,* than to the structure which forms the link with the brain, as *an organ of sensation.* I must, however, refer those who wish to see more of the subject, to the work* in which it is more fully discussed, under the term, "The Law of Inflammation," which is a bad phrase, as imperfectly expressing the law; but as the greatest evils it exposes occur in cases of Inflammation, and as it shows the essential nature of that process to be entirely distinct from the characters which had been usually ascribed to it, every one of which may be absent—so that expression was somewhat hastily given to the generalization which seemed best to express a great practical fact.

To return to the bearing of all this on Abernethy's views, and in relation to organs primarily or secondarily affected. In obedience to the conservative law to which I have above alluded, defective function in one organ is usually accompanied by increased action in some other; and thus it happens that the symptoms are *almost always* in one organ, whilst the cause, or originally injurious influence, has acted on another. The general reader will, of course, understand that we are not speaking of direct mechanical injury to an organ. *Now* all the most recondite diseases of the kidney are already acknowledged by many to be seated in a secondarily affected organ. Still the practice is, in too many instances, a *strange mixture* of that which is in accordance with the true view, more or less marred by much *that is in opposition to it;* because it often includes that which is certain more or less to *disturb* the organ which it should be the object to tranquillize or relieve.

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* "Medicine and Surgery One Inductive Science." London, 1838. Highley.

In the same manner, the lungs and heart are continually disordered, and ultimately diseased, from causes which primarily act on the liver; and I have seen such a case treated with cod-liver oil and bitter ales, with a result which could not but be disastrous. The liver sends an enormous quantity of blood to the heart and lungs, from which it ought previously to have extracted a certain quantity of carbon (bile). If this be not done, the heart and lungs are oppressed both by the quantity and the quality of the blood sent to them. If nothing happen in either of the various sites I have mentioned, the blood must be got rid of; and it is so. In many cases, a vessel gives way; or blood is poured out from a vessel; or blood is employed in building up the structures of disease; but then the *symptoms* are frequently altogether in the chest, and not a sign of anything wrong in the liver.

I cannot go on with the multitudinous illustrations of these principles. The law is to determine injurious influences to the surface. Deposition in the cellular tissue of the lung is bad enough; but it is better—that is, less certainly fatal—there, than in the respiratory tubes: and that is the explanation.

But now comes the practical point. How is the primary organ to be got at? because that is the way to carry out the removal of the impediments to the sanative processes of nature, which, in many cases, no *mere general* treatment can accomplish. This is to be found by an examination into the *whole* (that is, the former *as well as* the more recent) history of the case, and adding the further test of a real and careful observation of all the secretions.

By going back to the former life of the patient, we shall seldom fail to discover the various influences to which he has been subjected, and the organs to which they have been originally addressed. Having made up our minds, from our previous knowledge of injurious influences, on what organ they will most probably have acted, we now test this, not merely by inquiry after symptoms—and it may be not by symptoms at all—but by careful observation of the *actual work* of the suspected organ. In this way we almost certainly discover the real offender; in other words, the organ primarily affected. This is of immense importance; for we confidently affirm that *one single beneficial impression made on it* will do more in a short time—nay, in some rare instances, *in a single day*—than years of routine treatment, that has been, nevertheless, of good *general* tendency.

In treating it—*i. e.* the primary organ—however, great discrimination is necessary. If it be already organically affected, that treatment which would be, under *other circumstances,* necessary, becomes either objectionable, or requiring the utmost caution. For although an organ *diseased in structure* will, under some circumstances, as Abernethy long ago observed, yield its characteristic secretion, yet, unless we know the *extent* of the disease, which is just the thing we can almost never be certain about, excitement of it is *never without danger.* We should therefore excite the primary organ with more or less energy, with more or less caution, or *not at all,* according to circumstances. If we determine on not exciting it, we should then act on organs *with* which it has ordinarily closest *community* of function, or on whose integrity we can most depend. For choice, we prefer organs which, in a natural state, have nearest identity of function, as having the readiest sympathy, it may be, with each other. Yet so universal is the sympathy between all the organs, that there is no one that will not, under certain circumstances, or which may not be induced, perhaps, by judicious management, to take on *compensating* actions.

We must not here pursue this subject further. We have endeavoured to sketch certain extensions of the views of Mr. Abernethy, and can only refer the profession and the public, for the facts and arguments which demonstrate and illustrate them, to those works in which they have been enunciated*. They have now been subjected to severer trials, and abundant criticisms. So far as we know, they have not been shaken; but if there be any merit in them, if they shall have made any nearer approach to a definite science, or sketched the proofs that Induction alone can place us in a position to talk of science at all, *they are still sequences which have been arrived at by a steady analysis of Abernethy's views.* It was he who taught us, in our pupil days, first to think on such subjects; to him we owe the first glimpse we ever had of the imperfect state of medical and surgical science; and if we do not wholly owe to him the means by which we conceive it can alone be rendered more perfect and satisfactory, he has at least in part exemplified the application of them. If we have made some advances on what he left us, and added to his beautiful and simple general views, something more definite on some points, something more *analytical* on others,—still, inasmuch as they are clear deductions from the views he has left us, and from such views alone, such advances remind us that the study of his principles serves but to demonstrate their increasing usefulness, and to augment the sum of our obligations.

SECTION.

Mr. Abernethy's book "On the Constitutional Origin of Local Diseases" had an extensive circulation, and excited a great deal of attention from the public as well as the profession.

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* "Medicine and Surgery One Inductive Science;" and "On Tumours," Art. "Treatment of Organs."

As a work which may be read as it were in two days, so as a person read it with one or other subject, it produced a great variety of impressions. It may be read simply as a narrative of a number of facts, with the inferences immediately deducible from them. All this is plain and intelligible at once to anybody, and of great practical value; but the work contains numerous observations of a suggestive kind, which require careful thought, and some previous knowledge, to enable a person to estimate their value, or to trace their onward relations. The impression made by the work on different minds varied, of course, with the reader, his information, and, in some sort, with the spirit in which it was studied. Some, who had, in their solitary rides, and in the equally solitary responsibilities of country practice, been obliged to think for themselves, recognized, in the orderly statement of clearly enunciated views, facts and principles which they had already seen exemplified in their own experience, and hailed with admiration and pleasure a book which realized their own ideas, and supplied a rational explanation of their truth and value.

Some, who had never thought much on the subject, and were very ill-disposed to begin, regarded his ideas as exaggerated, and hastily dismissed the subjects, with the conclusion that he was a clever man, but too full of theory, and too much disposed to look to the stomach or the digestive organs. Others, making very little distinction between what they heard of the man, the book, or his practice, and probably not having seen either, but deriving only a kind of dreamy notion of a clever man with many peculiarities, would say that he was mad, or an enthusiast. Still, a great many of the thinking portion of the public and the profession held a different tone. The book was recognized as an intelligible enunciation of definite views—rather a new thing in medical science. The application of them became more and more general; his pupils were everywhere disseminating them, more or less, in the navy, in the army, in the provinces, and in America.

Still, it must not be imagined that his principles became diffused with that rapidity which might have been inferred from his numerous and attentive class. Constituted as medical education is, but more especially as it was at that time—for it is *slowly* improving—pupils were almost entirely absorbed in the conventional requisitions for examination. There, they were not questioned as to the laws of the animal economy, nor any *laws* at all, nor even on any real axioms in approximation to them; but simply as to plain anatomy, the relative situation of parts, and such of the ordinary surgery of the day as had received the approbation of the Examiners, who were, for the time, the authorities in the profession. Therefore, out of a large number, there were comparatively few whose attentions were not too much absorbed by the prescribed curriculum of hospital routine to study principles: a curriculum constructed as if the object were to see how much could be learnt in a short time, without detriment to the very moderate requisitions of the examination at the College of Surgeons. But if comparatively few had time to study Abernethy's lectures at the time, a great many had treasured up his remarks. As the impressions we receive in our childhood, before we are capable of thinking of their value, are vividly rekindled by the experience of real life, so many of the more suggestive lessons of Abernethy's lectures, which passed comparatively unheeded at the time, or were swamped in the "getting up" of the requisitions for an examination at the College, recurred in after days in all their force and truthfulness. Many, however, with more time, and perhaps more zeal, endeavoured to thoroughly master his views; and now and then he was gratified by evidence, that time had only served to mature the conviction of the pupils—in dedications and other complimentary recognitions, in the works of such of them as had been induced to publish any portion of their own experience.

However various, too, the impressions made by his book, there are two things certain; viz. that he was much talked of, and the book had an extensive sale, went through several editions, and served to give the *public* some notion of those principles which he was so beautifully unfolding to the younger portions of the profession in his lectures. Besides, although there were not wanting those who spoke disparagingly of him, still, as an old and very far-seeing colleague of our own used to say, with perhaps too much truth, when canvassing the various difficulties of a medical man's progress in the metropolis, "A man had better be spoken ill of, than not spoken of at all." He was now beginning to be very largely consulted. The Public had "got hold of him," as we once heard a fashionable physician phrase it, and he soon obtained a large practice. A great many consulted him for very good reasons, and probably many for little better reason than that he was the fashion.

Abernethy had now an amount of practice to which neither he nor any other man could do full justice Finding it impossible to make people understand his views in the time usually allotted for consultation, he now referred his patients to his book, and especially page 72. This has been made the subject of a great deal of quizzing, and of something besides, not altogether quite so good-natured. For our parts, we think it the most natural thing in the world to refer a patient to a book, which may contain more in full the principles we desire them to understand, than we can hope to find opportunity to explain at the time of consultation. We think that if asking a few questions, and writing a prescription (and we are here only thinking of a reasonably fair average time visit), be worth a guinea, the explaining a principle, or so placing a plan before a patient that his following it may be assisted and secured, is worth fifty times as much; and it came particularly well from Abernethy, one of whose lessons, and a most excellent lesson too, was the remark, "That if a medical man thought he had done his duty when he "had written a prescription, and a patient regarded his as ful-"filled when he had swallowed it, they were both deceived."

As we are convinced that, *cæteris paribus*, success in medical treatment is indefinitely promoted by both patient and surgeon *clearly understanding* each other as to *principles*, we think it would be of great use if every medical man, who has any definite principles of practice, were to explain them in short printed digests. Nay, we have sometimes thought it would be useful to both parties, if, in addition to the inquiries and advice given at consultation, a medical man should have brief printed digests of the *general* nature and relations of most of the well-defined diseases. A careful perusal of one of these would help the patients to comprehend the nature and objects of the advice given, tend to the diffusion of useful knowledge, and in time help them to understand whether their treatment were conducted on scientific views, or merely a respectable sort of empiricism. What is here intended might be printed on a sheet of note paper; and, whilst it would be of great service to the patient, would form *no bad test of the clearness and definite principles of the medical attendant.* There is no doubt that Abernethy did good service by referring patients to his book. It led some to think for themselves, and it also assisted, *pro tanto,* in doing away with that absurd idea which supposes something in medical practice inappreciable by the public.

At this time, whilst, with a considerable indifference to money, he was making a large income, still he was obliged to work hard for it. He had as yet no emolument from the Hospital; he was still only an assistant surgeon. The tenacity of office, of which assistant surgeons so commonly complain, they have themselves seldom failed to exercise when they have become surgeons (Mr. Abernethy, however, excepted). The long tenure of office by his senior (Sir James Earle) wearied him, and was at times a source of not very agreeable discussions.

On one occasion, Sir James was reported to have given Abernethy to understand that, on the occurrence of a certain event, on which he would obtain an accession of property, he, Sir James, would certainly resign the surgeoncy of the hospital. About the time that the event occurred, he happened one day to call on Abernethy, and was reminded of what he had been understood to have promised. Sir James, however, having, we suppose, a different impression of the facts, denied ever having given such a pledge. The affirmative and negative were more than once exchanged, and not in the most courteous manner. When Sir James was going to take his leave, Abernethy opened the door for him, and, as he had always something quaint or humorous to close a conversation with, he said, at parting, " Well, Sir James, it comes to this: you say that you " did not promise to resign the surgeoncy of the hospital; I, on " the contrary, affirm that you did: now all I have to add is, " ——— the liar!"

In 1813, Abernethy accepted the surgeoncy of Christ's Hospital, which he held until 1828, a short time before he retired from practice.

In 1814, he was appointed Professor of Anatomy and Surgery to the College of Surgeons—an appointment which could be, at this period, of little service to him, whatever lustre it might reflect on the College, where he gave lectures with a result which has not always followed on that appointment: namely, of still adding to his reputation. He was one of the few who addressed the elders of the profession without impressing the conviction that he had been too much employed in addressing pupils. He had given lectures two years in succession, when, in 1816, circumstances occurred which will occupy us for some little time. A new scene will be opening upon us; and this suggests the period (1815-16) as convenient for taking a retrospect, and a sort of general view of Abernethy's position.

CHAPTER XVII.

" Sperat infestis, metuit secundis,
Alteram sortem bene preparatum Pectus."

HOR.

" Whoe'er enjoys th' untroubled breast,
With Virtue's tranquil wisdom blest,
With hope the gloomy hour can cheer,
And temper happiness with fear."

WHEN we look abroad amongst mankind—nay, even in the contracted sphere of our own experience—it is interesting to observe the varied current of human life in different cases. In some, from the cradle to the grave, life has been beset with difficulties; it has been a continued struggle; the breath seems to have been first drawn, and finally yielded up, amidst the multifarious oppositions and agitations of adversity. In other instances, life seems like an easy, smoothly gliding stream, gently bearing Man on to what had appeared to be the haven of his wishes; and the little voyage has been begun and completed without the appearance of a ripple. All varieties are, no doubt, the result of constantly operating laws. Of these, many are probably inscrutable by us; many more, no doubt, escape our observation. The unforeseen nature of many events confers the character of mystery on any attempt at foresight; yet, when we take a careful retrospect of a life, it is curious to observe how naturally the secondary causes appear to have produced the results by which they were followed; but which, beforehand, no one had thought of predicting.

Varied, however, as is the course of human life, few men have arrived at eminence without difficulty. We do not mean that ephemeral prominence of "position" which makes them marked in their day; but that which leaves the impression of their minds on the age in which they lived, or on the science or other pursuit which they had chosen—original minds, who have enlarged the boundaries of our knowledge. Such men usually have the ample gifts of nature with which they are endowed, somewhat counterbalanced by the difficulty experienced in the successful application of them.

Abernethy had not been altogether exempt from such difficulties. With a sensitive organization, he had had to make his own way; he had experienced the difficulties which attend the advocacy of opinions and principles which were opposed to, or at all events different from, those generally entertained. He had had to encounter that misconstruction, misrepresentation, ridicule, even malice—save the mark!—which are too frequently provoked by any attempts to tell people that there is something more correct than the notions which they have been accustomed to value. Still, when we compare Abernethy's course with that of *many*—we had almost said *most*—benefactors to science, he might be said to have been a fortunate man. If a man has power, and a "place to stand on"—and Abernethy had both—truth will tell at last.

A retired spot, a room in an obscure street, near St. Bartholomew's, had been by his unaided talents expanded into a theatre within the walls of the hospital. This was becoming again crowded; and, although it formed a satisfactory arena for the development and illustration of his principles, the increasing audiences were significant of the coming necessity of a still larger building; which was, in fact, a few years afterwards, constructed. He had indeed arrived, as we imagine, at a point which was comparatively smooth water, and which we are inclined to regard as the zenith of his career.

In the opening of his beautiful lectures at the College, Abernethy, in one of his warm and earnest endeavours to animate his audience to regard benevolence, and the love of truth, as the impulses which could alone urge on, and sustain, industry in cultivating the "Science" of our profession, had observed that, "unfortunately, a man might attain to a considerable "share of public reputation without being a real student of his "profession." There have been indeed too many examples of that, as also of those who, after years of labour, have failed to obtain a scanty living.

Abernethy had been a real and laborious student in science, and he was now reaping an abundant and well-deserved fruition. Few surgeons have arrived at a position so calculated to satisfy the most exacting ambition. Although the full extent and bearing of his principles were by no means universally understood, yet the general importance of them was so, and in some measure appreciated. In a greater or less degree, they were answering the tests afforded by the bedside in all parts of the world.

Ample, therefore, as might be the harvest he was reaping in a large practice, he was enjoying a still higher fruition in the kind of estimation in which he was held. He had a high reputation with the public; one still higher amongst men of science. His crowded waiting-room was a satisfactory evidence of the one, and the manner in which his name was received here, on the Continent, and in America, a gratifying testimony of the other. He was regarded much more in the light of a man of enlarged mind—a medical philosopher—than merely as a distinguished surgeon.

From the very small beginnings left by Mr. Pott, he had raised the school of St. Bartholomew's to an eminence never before attained by any school in this country. I think I may say that, in its *peculiar character*, it was at that time (1816) unrivalled.

Sir Astley Cooper was in great force and in high repute at this time; and, combining as he did the schools of *two* large hospitals, had, I believe, even a larger class. Both schools, no doubt, endeavoured to combine what is not, perhaps, very intelligibly conveyed by the terms practical and scientific; but the universal impression, assigned the latter as the distinguishing excellence of Mr. Abernethy, whilst the former was held to express more happily the characteristic of his eminent contemporary.

Whatever school, however, a London student might have selected as his Alma Mater, it was very common for those whose purse, time, or plans permitted it, to attend one or more courses of Abernethy's lectures; and it was pleasing to recognize the graceful concession to Mr. Abernethy's peculiar excellence afforded by the attendance of some of Sir Astley's pupils, and his since distinguished relatives, at the lectures of Abernethy.

As I have said, his practice was extensive, and of the most lucrative kind; that is, it consisted largely of consultations at home. Still, he had patients to visit, and, as he was very remarkable for punctuality in all his appointments, was therefore not unfrequently obliged to leave home before he had seen the whole of those who had applied to him. The extent of his practice was the more remarkable, as there was a very general impression, however exaggerated it might be, that his manners were unkind and repulsive. His pupils were enthusiastically fond of him; and it was difficult to know which was the dominant feeling—their admiration of his talents, or their personal regard.

Some of the most distinguished men had been of their number; and it would be gratifying to us to enumerate the very complimentary catalogue of able men who have been indebted for much of their eminence and success to the lessons of Abernethy; but as, in doing so, we might possibly, in our ignorance, omit some names which ought to be recorded, we forego this pleasure, lest we should unintentionally appear to neglect any professional brother whom we ought to have remembered.

In 1812-13, the pupils had presented Mr. Abernethy with a piece of plate, "as a testimony of their respect and gratitude." The arrangement of the matter was confided chiefly to the present Sir James Eyre, Mr. Stowe of Buckingham, and Mr. George Bullen. In a very interesting letter, with which I have been favoured by Mr. Stowe, amongst other matters hereafter to be mentioned, it is stated that the plate was delivered at Abernethy's house on the 1st of April; and as he had no more entirely escaped such things than other medical men, he at first regarded it as a hoax. But when the contents were exposed, and he discovered the truth, he became much affected.

The regard of the pupils was always the thing nearest his heart. On meeting the class at the hospital, he essayed to express his feelings; but finding that he should only break down, he adopted the same course as he had employed on another memorable occasion, and *wrote* his acknowledgments, a copy of which was suspended against the wall of the theatre.

It is due to our worthy and kind-hearted contemporary, Sir James Eyre, to add that Mr. Stowe observes in his letter, that, of all others, Sir James was the most zealous promoter of a movement so creditable to all parties. Some years after this, another subscription was commenced by the pupils for a portrait of Abernethy, which was painted by Sir Thomas Lawrence, and engraved by Bromley. It was after this engraving that Mr. Cook executed the portrait which forms the frontispiece of the present volume. Sir Thomas, and the engraver after him, have been most successful. He has caught one of Mr. Abernethy's most characteristic expressions. We see him as he often stood when addressing the *anatomical* class. We think it impossible to combine more of of him in one view. We fancy we see his acute penetration, his thoughtful expression, his archness and humour, and his benevolence, all most happily delineated, whilst the general position and manner is eminently faithful. In his surgical lectures, he was generally seated; and in the lithograph, he is represented in the position which he almost invariably assumed when he was enunciating the proposition which is placed beneath the engraving. It is the work of a young artist who was considered to evince great promise of future excellence; but who, we regret to say, died last year—Mr. Leighton.

In 1815, he had been appointed surgeon to the hospital, after twenty-eight years' tenure of the assistant surgeoncy; a subject that we merely mention now, as we shall be obliged to revert to it when we consider the subject of the "Hospital System."

At the time to which we allude, lecturing had become so easy as to appear little more than amusement to him; yet there were (we speak of about 1816) no signs of neglect or forgetfulness. His own interest in the subject was sustained throughout; but as his unrivalled lecturing will be more fully described, we must not anticipate. Few old pupils visited London without contriving to get to the hospital at lecture time. The drudgery of the early morning anatomical demonstration was taken off his hands by a gentleman who performed his task with credit to himself and with justice to his pupils.

Abernethy, at this time, in addition to a successful school, a large and attached class, a solid and world-wide reputation, was receiving numerous proofs that his principles were recognized; that, however imperfectly adopted, they were gaining ground; and that if all his suggestions were not universally admitted, they were becoming axiomatic with some of the first surgeons, both in this and other countries.

We think it not improbable that it was somewhere about this period that it was proposed to confer on him the honour of a Baronetcy. We had long been familiar with the fact; but not regarding it as very important, and having nothing in proof of it but the generally received impression, we omitted any reference to it in the first edition of these Memoirs. Finding, however, more interest attached to the circumstance than we expected, we have communicated with the family on the subject, and have ascertained that all the circumstances are fresh in their recollection, although they cannot recall the exact period at which they occurred.

His first announcement of the fact to his family was at table, by his jocosely saying: "Lady Abernethy, will you allow me to assist you to—?" &c. Having had his joke, he then formally announced to them the fact, together with the reasons which had induced him to decline the proffered honour—namely, that he did not consider his fortune sufficient, after having made what he regarded as only a necessary provision for his family.

It is probable that his motives were of a mixed character. We do not believe that he attached much value to this kind of distinction, and that, had he availed himself of the offer, it would have been rather from a kind of deference to the recognition it afforded of the claims, and thus indirectly promoting the cultivation of Science, than for any other reason. It was not but that he held rank and station in the respect which is justly due to them; but that he regarded titles as no very certain tests of scientific distinction. Enthusiastic in his admiration of intellectual, still more of moral excellence, he had something scarcely less than coldness in regard to the value of mere titles; whilst he beheld, with something like repulsion, the flattery to which their possessors were so often exposed.

There are men who have so individualized themselves that they seem to obscure their identity by any new title. John Hunter was scarcely known by any less simple appellation. We hardly now say "*Mr.*" Hunter without feeling that we may be misunderstood. It begins to have a sound like "Mr." Milton or "Mr." Shakspeare; Abernethy and John Abernethy are fast becoming the only recognized designations of our philosophical surgeon, for even the modest prefix of *Mr.* is fast going into disuse. Be this as it may, it is certain he declined the honour; and to us it is equally so that he felt at least indifferent to it; for although the good sense and good feeling implied in the reasons alleged were characteristic, yet, had they constituted the only motive, he might, with his abundant opportunities, have removed that objection in a very reasonable time, without difficulty.

It is perhaps significant of the measured interest with which Mr. Abernethy regarded the acquisition of a Baronetcy, that the family could not recollect the period at which it was offered. This information, however, I obtained from Sir Benjamin Brodie, who has kindly allowed me to record the fact in the following reply to my inquiry on the subject.

"14, Saville Row,
"November 16, 1854.

"My dear Sir,

"My answer to your inquiry may be given in a very few "words. I perfectly well remember the having been informed "by the late Sir John Becket that he had been commissioned by "Lord Liverpool to offer Mr. Abernethy, on the part of the "Crown, the honor of being created a Baronet, which, however, "Mr. Abernethy declined.

"I am, dear Sir,
"Yours faithfully,
"B. C. Brodie."

"G. Macilwain, Esq."

He told me once of an interview he had with Lord Castlereagh, which may, perhaps, be not out of place here. When Sir T. Lawrence was painting the portrait, and Abernethy went to give him a sitting, Abernethy was shown into a room where another visitor, a stranger to him, was also waiting. The stranger, looking at a portrait of the Duke of York, observed, "Very well painted, and very like." "Very well painted," Abernethy replied. The other rejoined: "A good picture, and an excellent likeness." "A very good picture," said Abernethy. "And an excellent likeness," again rejoined his companion. "Why, the fact is," said Abernethy, "Sir Thomas has lived so much amongst the great, that he has learnt to flatter them most abominably." On being shown in to Sir Thomas, Sir Thomas said: "I find you have been talking to Lord Castlereagh."

He had not, we think, as yet sustained the loss of any member of his family, nor hardly experienced any of those ordinary crosses from which few men's lives are free, and which, sooner or later, seldom fail to strew our paths with enough to convince us that perfect peace cannot be auspiciously sought in the conduct of human affairs. He was soon, however, to receive an impression of a painful nature, and from a quarter whence, whatever might have been his experience, he certainly little expected it. Long accustomed to be listened to by admiring and assenting audiences, whether in the theatre of the hospital, or in those clusters of pupils which never failed to crowd around him whenever he had anything to say; he was now to have some of his opinions disputed, his mode of advocating them impugned, his views of "Life,' made the subject of ridicule, and even his fair dealing in argument called in question. All this, too, by no stranger; no person known only to him as one of the public, but by one who had been his pupil, whose talents he had helped to mature and develop, whose progress and prospects in life he had fostered and improved, and to whom, as was affirmed by the one, and attested by the other, he had been a constant friend.

That this controversy was the source of much suffering to Abernethy, we are compelled to believe; and it is altogether to us so disagreeable, and difficult a subject, that we should have preferred confining ourselves to a bare mention of it, and a reference to the works wherein the details might be found; it is, however, too important an episode in the life of Abernethy to be so passed over; it suggests many interesting reflections; it exhibits Abernethy in a new phase, illustrates, under very trying circumstances, the

> "Virtus repulsæ nescia
> Intaminatis fulget honoribus,"

and brings out in stronger relief than any other transaction of his life the best and most distinctive traits of his character (benevolence and Christian feeling), under temptations which have too frequently disturbed the one, and destroyed the other.

CHAPTER XVIII.

"Opinionum commenta delet dies, naturæ judicia confirmat."—CICERO.

"Time, which obliterates the fictions of opinion, confirms the decisions of nature."

WHOEVER has wandered to the south side of Lincoln's Inn Fields, will have found himself in one of the "solitudes of London"—one of those places which, interspersed here and there amidst the busy current that rushes along every street and ally, seem quite out of the human life-tide, and furnish serene spots, a dead calm, in the midst of tumult and agitation. Here a lawyer may con over a "glorious uncertainty," a surgeon a difficult case, a mathematician the general doctrine of probability, or the Chevalier d'Industrie the particular case of the *habitat* of his next dinner; but, unless you have some such need of abstraction from the world, these places are heart-sinkingly dull. You see few people; perhaps there may be a sallow-looking gentleman, in a black coat, with a handful of papers, rushing into "chambers;" or a somewhat more rubicund one in blue, walking seriously out: the very stones are remarkably round and salient, as if from want, rather than from excess, of friction. The atmosphere from the distance comes charged with the half-spent, booming hum of population.

Immediately around you, all is comparatively silent.

If you are in a carriage, it seems every moment to come in contact with fresh surfaces, and "beats a roll" of continued vibrations; or, if a carriage happen to pass you, it seems to make more noise than half a dozen vehicles anywhere else. You may observe a long façade, of irregular elevations—upright parallelograms, called habitable houses; but, for aught you see, half of them may have been deserted: the dull sameness of the façade is broken only by half a dozen Ionic columns, which, notwithstanding their number, seem very serious and very solitary. You may, perhaps, imagine that they bear a somewhat equivocal relation to the large house before which they stand. You may fancy them to be architectural relics, inconveniently large for admission to some depository within, or that they are intended as a sort of respectable garniture to the very plain house which they partly serve to conceal or embellish; or quiz them as you please, for architects cannot do everything, nor at once convert a very ugly house into a very beautiful temple.

But, stop there!—for temple it is—ay, perhaps, as human temples always are, not altogether unprofaned; but not so desecrated, we trust, but that it may yet contain the elements of its own purification. It enshrines, reader, a gem of great value, which nothing extrinsic can improve, which no mere art can embellish—a treasure gathered from the ample fields of nature, and which can be enriched or adorned only from the same exhaustless store. Though humble, indeed, the tenement, yet, were it humbler still, though it were composed of reeds, and covered in with straw, it would remain hallowed to science.

It holds the monument of the untiring labour of a great master—the rich garnerings of a single mind—the record, alas![*] but of *some* of the obligations mankind owe to the faithful pioneer of a Science which, however now partially merged in clouds and darkness, and obscured by error, still exhibits through the gloom, enough to assert its lofty original, and to foster hopes of better times.

The museum of John Hunter (for it is of that we write) is one of the greatest labours ever achieved by a single individual. To estimate that labour aright, to arrive at a correct notion of the man, the spectator should disregard the number of preparations—the mass of mechanical and manipulatory labour which is involved—the toil, in fact, of mere collection; and, looking through that, contemplate the *thought* which it records; the general nature of the plan; the manner in which the Argus-eyed Author has assembled together various processes in the vegetable creation; how he has associated them with their nearest relations in the animal kingdom; and how he has traced the chain from link to link, from the more simple to the more compounded forms, so as to throw light on the laws dispensed to Man. The spectator should then think of the Hunterian portion of the museum as the exhausting harvest of half a life, blessed with no greatly lengthened days; a museum gathered not in peaceful seasons of leisure, nor amid the ease of undiverted thought, but amidst the interrupting agitations of a populous city—the persistent embarrassments of measured means—the multiform distractions of an arduous profession—the still more serious interruptions of occasional indisposition—and, finally, amidst annoyances from quarters whence he had every right to expect support and sympathy—annoyances which served no other purpose but to embitter the tenure of life, and to hasten its termination.

Our space will not allow us to dwell more on this subject or the Museum just now. But where is our excellent conservator —where is Mr. Clift, the assistant, the friend, and young companion of John Hunter? He, too, is gathered to his rest. He, on whose countenance benevolence had impressed a life-long smile—he who used to tell us, as boys, so much of all he knew, and to remind us, as men, how much we were in danger of forgetting—is now no more. How kind and communicative he was; how modest, and yet how full of information; how acceptably the cheerfulness of social feelings mantled over the staid gravity of science. How fond of any little pleasant story to vary the round of conservative exposition; and then, if half a dozen of us were going round with him the "*con*ticuere omnes," when, with his characteristic prefatory shrug, he was about to speak of Hunter. Then such a memory! Why once, in a long delightful chat, we were talking over the Lectures at the College, and he ran over the general objects of various courses, during a succession of years, with an accuracy which, if judged of by those which had fallen within our own recollection, might have suggested that he had carried a syllabus of each in his pocket.

We had much to say of Mr. Clift; but, in these times of speed, there is hardly time for anything; yet we think that many an old student, when he has lingered over the stately pile reared by John Hunter, may have paused and felt his eyes moistened by the memory of William Clift.

When Mr. Abernethy lectured at the College, there was no permanent professor, as is now the case; no Professor Owen, of whom we shall have to speak more in the sequel. Both the professorship of anatomy and surgery, and also that of comparative anatomy, were only held for a comparatively short time.

It is not very easy to state the principle on which the professors were selected. The privilege of addressing the seniors of the profession has never, any more than any other appointment in the profession, been the subject of public competition; nor, unless the Council have had less penetration than we are disposed to give them credit for, has "special fitness" been a very dominant principle. Considering the respectability and position of the gentlemen who have been selected, the Lectures at the College of Surgeons, under the arrangements we are recording, were certainly much less productive, as regards any improvement in science, than might have been reasonably expected.

The vice of "system" could not be always, however, corrected by the merits of the individual. One result, which too commonly arose out of it, was, that gentlemen were called on to address their seniors and contemporaries for the first time, who had never before addressed any but pupils. It would not, therefore, have been very wonderful, if, amongst the other difficulties of lecturing, that most inconvenient one of all should have sometimes occurred, of having nothing to say.

Mr. Abernethy was appointed in 1814, and had the rare success of conferring a lustre on the appointment, and the perhaps still more difficult task of sustaining, before his seniors and contemporaries, that unrivalled reputation as a lecturer which he had previously acquired. As Mr. Abernethy had been all his life teaching a more scientific surgery, which he believed to be founded on principles legitimately deducible from facts developed by Hunter; so every circumstance of time, place, and inclination, disposed him to bring Mr. Hunter's views and opinions under the review of the audience at the College, composed of his seniors, his contemporaries, and of pupils from the different schools. He was, we believe, equally desirous of disseminating them amongst the one class, and of having them considered by the others. At this time, no lectures of Mr. Hunter had been published; and Mr. Abernethy thought that, *to understand* Hunter's opinions of the *actions* of living bodies, it was expedient that people should have some notion of what Mr. Hunter considered to be the general nature of—"Life."

We hold this point to be very important; for all experience shows that speculation on the abstract nature of things is to the last degree unprofitable. Nothing is so clear in all sciences as that the proper study of mankind is the Laws by which they are governed. Yet we cannot, in any science, proceed without something to give an intelligible expression to our ideas; which *something* is essentially hypothetical.

If, for example, we speak of light, we can hardly express our ideas without first supposing of light that it is some subtle substance sent off from luminous bodies, or that it consists in undulations; as we adopt the corpuscular or undulatory theory. It would be easy to form a third, somewhat different from either, and which would yet pretend to no more than to give a still more intelligible expression to phenomena.

Now this is, as it appears to us, just what Mr. Abernethy did. He did not speculate on the nature of life for any other reason than to give a more intelligible expression to Mr. Hunter's other views. At that time there was nothing *published*, showing that Mr. Hunter's ideas of life were what Mr. Abernethy represented them to be; they might have been remembered by men of his own age, but this was not very good for controversy; and as that was made a point of attack*, it is well that the since collected "Life and Lectures of John Hunter," by Mr. Palmer, have given us a written authority for the accuracy of Abernethy's representations.

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* "For this Hunterian Theory of Life, which its *real* author so stoutly "maintains, &c. is nowhere to be found in the published writings of Mr. "Hunter."—*See Lawrence's Two Lectures* (*Notes*).

In theorizing on the cause of the phenomena of living bodies, men have, at different times, arrived at various opinions; but although not so understood, it seems to us that they all merge into two—the one which supposes Life to be the result of organization, or the arrangement of matter; the other, that the organization given, Life is something superadded to it; just as electricity or magnetism to the bodies with which these forces may be connected. The latter was the opinion which Mr. Abernethy advocated as that held by Mr. Hunter, and which he honestly entertained as most intelligibly and rationally, in his view, explaining the phenomena.

That such were really the views held by Mr. Hunter, a few passages from the work, as published by Mr. Palmer, will show. " Animal and vegetable substances," says Mr. Hunter, "differ from " common matter in having a power superadded totally different " from any other known property of matter; out of which various " new properties arise*." So much for a general view. Next, a reference to particular powers: " Actions in animal bodies have " been so much considered under a chemical and mechanical " philosophy, that physiologists have entirely lost sight of Life;" again showing how correctly Abernethy had interpreted Hunter's notion of the necessary "Key," as Abernethy phrased it, to his views; Hunter says: " For unless we consider Life as the immediate cause of attraction occurring in animals and vegetables, " we can *have no just conception* of animal and vegetable matter†." Mr. Hunter, in relation to the idea of life being the result of organization, shows how faithful an exposition Abernethy had given of his views. " It appears," says he, " that the Living " Principle cannot arise from the peculiar modification of matter, " because the same modification exists where this principle is no " more."—Vol. i, p. 221. And in the same page: " Life, then, " appears to be something superadded to this peculiar modification " of matter."

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* Vol. i, p. 214. Note.

† Vol. i, p. 217.

Then as to one of the illustrations employed by Abernethy. Hunter, after saying that he is aware that it is difficult to conceive this superaddition, adds: "But to show that matter may take "on new properties without being altered itself as to the species "of matter, it may not be improper to illustrate this. Perhaps "magnetism affords the best illustration. A bar of iron, without "magnetism, may be considered as animal matter without life. "With magnetism, it acquires new properties of attraction and "repulsion," &c.

Mr. Abernethy, as we have said, advocated similar views; and, we repeat, founded his reason for so doing on what he conceived to be the necessity of explaining Mr. Hunter's ideas of life, *before he could render* his (Hunter's) *explanation* of the various phenomena intelligible. In all of this, he certainly was expressing Mr. Hunter's own views, with that talent for ornamenting and illustrating everything he discussed, for which he was so remarkable.

Abernethy multiplied the illustrations by showing the various analogies which seemed to him to be presented in the velocity, the chemical, and other powers of Life and Electricity; and, with especial reference to the extraordinary discoveries of Sir Humphrey Davy, added such illustrations, as more recent achievements in chemical science had placed within his grasp; and thence concluding it as evident that some subtile, mobile, invisible substance seemed to pervade all nature, so it was not unreasonable to suppose that some similar substance or power pervaded animal bodies. He guarded himself, however, both in his first and again in his second Course of Lectures, from being supposed to identify Life with electricity, in a long paragraph especially devoted to that object. In his second Course, in 1815, he proceeded to enumerate John Hunter's various labours and contributions to science, as shown by the Museum; imparting great interest to every subject, and in so popular a form, that we wonder now, when (as we rejoice to see) there are some small beginnings of a popularization of physiology, that there is not a cheap reprint of these Lectures.

Keeping, then, his object in view, we cannot see how, as a faithful interpreter of John Hunter, Abernethy could have done less; and if any theory of life at all is to be adopted, as *necessary to give an intelligible impression* to phenomena, one can hardly quarrel with that which takes the phenomena of life on one hand, and those of death on the other, as the means of expressing our ideas. When we see a man dead, whom we had contemplated alive, it certainly seems that something has left him; and whether we say "something superadded,"—the "breath" or "Life," or by whatever term we call it,—we appear really to express in as simple a form as possible the facts before us. It seems to us that, after all, John Hunter did little more; for the illustration or similitude by which we endeavour to render an idea clear, has in strictness nothing *necessarily* to do with the idea itself; any more than an analogy, however real the likeness, or a parallelism, however close, represents identity.

We should have thought it, therefore, of all things in the world the least likely that a representation of any theory of Hunter's should have disturbed the harmony which ought to exist between men engaged in scientific inquiries. It shows, however, the value of confining ourselves as strictly as possible to phenomena, and the conclusions deducible from them. Nothing could possibly be more philosophical than the terms in which Mr. Abernethy undertook to advocate Mr. Hunter's views of life. His definitions of hypothesis, the conditions on which he founded its legitimate character, the modesty with which he applies it, and the clearness with which he states how easily our best-grounded suppositions may be subverted by new facts, are very lucid and beautiful, and give a tone to the lectures (as we should have thought) the very last calculated to have led to the consequences which followed.

CHAPTER XIX.

"Oft expectation fails, and most oft there
Where most it promises."
ALL'S WELL THAT ENDS WELL.

No man, perhaps, ever made a happier application of a Divine precept to the conduct of human pursuits than Lord Bacon, when he said that the kingdom of man founded in the sciences must be entered like the kingdom of God—that is, as a little child.

Independently of the sublimity of the comparison, it is no less remarkable for its practical excellence.

How many broken friendships, enmities, and heart-burnings might have been prevented, had even a very moderate degree of the temper of mind here so beautifully typified been allowed to preside over human labour! How charitably should we have been led to judge of the works of others! how measured the approbation of the most successful of our own! No doubt, in the pursuit of truth, there is great difficulty in commanding that combination of fearlessness towards the world, and that reverential humility towards the subject, both of which are alike necessary; although the one may be more essential to the *discovery* of truth, the other the *enunciation* of it.

To pursue truth regardless of the multiform errors and conventionalisms, amidst which experience has generally shown almost all subjects to have been involved; unmindful of the rebukes and obloquy by which too often the best-conducted investigations are opposed and assailed; and yet to let no angry passion stir, no conviction that we are right engender an improper idea of our own superiority, or a disregard for the claims of others; this overcoming of the world (we had almost said) is intensely difficult, for it is in fact overcoming ourselves. Yet we dare not say it is that of which human nature is incapable, for there is nothing that the heart suggests as morally right which is really impossible to us; and instances have not been wanting of the combination of the deepest knowledge with the most profound humility.

On the other hand, it must be admitted that if there were anything especially calculated to bring down the cultivators of science and literature to the level of those who are regardless of the claims, or insensible to the attractions of either; we could hardly find a series of facts more fatally influential than are furnished by the disputes of men who have been employed in the cultivation of these elevating studies. Powerful intellects in teaching the comparative nothingness of man's knowledge seem to give great assistance in the acquisition of humility; but how few are the intellects of such power? The contemplation of nature, however, may, we conceive, infuse *feelings* of humility, which can rarely be attained by the efforts of intellect alone.

We have seen, in Lord Bacon, that the highest powers of intellect afforded for a while no security against the subtle, but one would have thought feeble, suggestions of a degrading cupidity. We all know, in literature, how much the fruits of intellect depend on the dominant feeling under which they are reared and nourished. Even men like Pope and Addison, who had little in common but that which should elevate and adorn human nature, were so dragged down by the demon of controversy, that, commencing with little more than the irritability of poets, they ceased only when they had forgotten even the language of gentlemen. In the controversy in question, Mr. Abernethy's position was a very difficult one, and one which shows how easily a man with the best intentions may find himself engaged in a discussion which he never contemplated; be wounded on points on which he was most sensitive, and yet defend himself with dignity, and without compromise of any of those principles which should guide a gentleman and a Christian.

Mr. Lawrence was appointed Professor of Comparative Anatomy in 1816; and we know that Mr. Abernethy hailed his appointment with considerable interest. He was regarded as a gentleman of some promise, and had already distinguished himself by a singularly nice, level style of composition, as well as by careful compilation.

Nothing could seem more auspicious than such a prospect. Mr. Abernethy was a man remarkable for the original view he took of most subjects; a vast experience, gathered from various sources by a mind combining vividly perceptive powers with great capacity for reflection, a conformation well adapted for opening out *new paths, and extending the boundaries of science.* Abernethy was now to be associated with a colleague who had already manifested no ordinary talent for the graceful and judicious exposition of what *was already known.*

Nothing could have seemed more promising; nor was there anything in the opening of Mr. Lawrence's first lecture which seemed calculated to baulk these expectations. His exordium contained an appropriate recognition of Mr. Abernethy, which, as we should only mar it by extract, we give entire. Having referred to the circumstances which immediately preceded his appointment, Mr. Lawrence thus proceeds:

" To your feelings I must trust for an excuse, if any be " thought necessary, for taking the earliest opportunity of giving " utterance to the sentiments of respect and gratitude I entertain " for the latter gentleman (Mr. Abernethy). You and the public " know, and have long known, his acute mind, his peculiar talent " for observation, his zeal for the advancement of surgery, and " his successful exertions in improving the scientific knowledge " and treatment of disease; his singular happiness in developing " and teaching to others the original and philosophic views which " he naturally takes of all subjects that come under his examina- " tion, and the success with which he communicates that enthu- " siasm in the cause of science and humanity which is so warmly " felt by himself; the admirable skill with which he enlivens the " dry details of elementary instruction are most gratefully acknow- " ledged by his numerous pupils.

" All these sources of excellence have been repeatedly felt in " this theatre. Having had the good fortune to be initiated in " the profession by Mr. Abernethy, and to have lived for many

" years under his roof, I can assure you, with the greatest sincerity, that however highly the public may estimate the surgeon " and philosopher, I have reason to speak still more highly of the " man and of the friend, of the invariable kindness which directed " my early studies and pursuits, and the disinterested friendship " which has assisted every step of my progress in life, the independent spirit and the liberal conduct which, while they dignify " the profession, win our love, command our respect for genius " and knowledge, converting these precious gifts into instruments " of the most extensive public good*."

This graceful exordium, so appropriate to the mutual relations of Mr. Abernethy and Mr. Lawrence, deriving, too, a peculiar interest from the circumstances under which it was delivered, had also the rare merit of an eulogium marked by a comprehensive fidelity. There is nothing fulsome or overstrained. Mr. Abernethy's well-known excellences were touchingly adverted to as matters with which all were *in common* familiar, whilst the necessarily more special facts of his social virtues were judiciously brought out in just relief, and as an appropriate climax, by one who appeared animated by a grateful and personal experience of them. It is distressing to think that anything should have followed otherwise than in harmony with that kindness and benevolence which, whilst it forms the most auspicious tone for the calm pursuits of philosophy, confers on them the purifying spirit of practical Christianity.

Mr. Lawrence's first lecture consisted mainly of an able and interesting *exposé* of the objects and advantages of Comparative Anatomy to the physiologist, pathologist, medical man, and the theologian; together with numerous references to those authors to whom the science was most indebted. The second lecture was devoted to the consideration and the discussion of various views which had been entertained of the living principle, or by whatever name we may designate that force which is the immediate cause of the phenomena of Living Bodies.

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* March, 1816. Introductory Lecture to Comparative Anatomy. Published, July.

Amongst others, those entertained by Mr. Hunter and advocated by Mr. Abernethy were referred to; but in a tone which was not, perhaps, best suited to promote calm discussion, and which we may be allowed to say was unfortunate—a tone of ridicule and banter, which was hardly suited either to the subject, the place, or the distinguished men to whom it related; to say the least of it, it was unnecessary. We do note quote these passages, because they are, we thiuk, not necessary to the narrative, and could, we think, now give no pleasure to any party*.

In Mr. Abernethy's next lecture at the College, he still advocated the rational nature of Mr. Hunter's views of Life; and, in a most interesting exposition of the Gallery of the Museum, opposed at every opportunity the views of certain French physiologists which Mr. Lawrence had adopted.

He did this, however, without naming Mr. Lawrence; and applied his remarks to the whole of those who had advocated the opinions that Life was the result of organization, as a "Band of modern sceptics."

Mr. Abernethy had, as he says, argued against a party, and studiously kept Mr. Lawrence, as an individual, out of view. He, however, argued roundly against the views advocated by him, and endeavoured to show that those of Mr. Hunter, besides being at least a philosophical explanation of the phenomena, had a good moral tendency; although he admitted that the belief that man was a mere machine did not alter established notions, and that there were many good sceptics, still he thought that the "belief "of the distinct and independent nature of mind incited people "to act rightly," &c.

In regard to the general influence of the state of France, he says, "Most people think and act with a party;" and that "in "France, where the writings of the philosophers and wits had "greatly tended to demoralize the people, he was not surprised "that their anatomists and physiologists should represent the "subject of their studies in a manner conformable to what is "esteemed most philosophical and clever; but that in this country

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* Introduction to Comp. Anat. by W. Lawrence, F.R.S. London, 1816.

" the mere opinions of some French anatomists with respect to the " nature of life should be extracted from their general writings, " translated, and extolled, cannot but excite surprise and indig- " nation in any one apprized of their pernicious tendency."

There is no doubt that there was at the time, in this country, a disposition in many people to disseminate very many opinions on various subjects different from those usually entertained; and we believe that this disposition was very greatly increased by the well-intentioned, no doubt, but in our view injudicious, means employed for the suppression of them.

We think it important to remember this; because, in estimating fairly any books or lectures, we must regard the spirit of the time in which they were delivered—what would be judicious or necessary at one period, being, of course, unnecessary or injudicious at another.

In relation to the opinions of the nature of life; that which Mr. Abernethy alleged that he intended to apply to a party, Mr. Lawrence alleged that he held as personally applying to himself. Accordingly, the following course of Mr. Lawrence's lectures commenced with " A Reply to the ' Charges' of Mr. Abernethy." This lecture, which it is impossible for any man, mindful of all the circumstances, to peruse without pain (especially if we include the notes), is couched in language of the most vituperative and contemptuous character: sarcasm, ridicule, imputation of corrupt motives, by turn, are the weapons wielded with the appearance of the most unrelenting virulence.

Those of the audience who had heard the graceful exordium, which we have quoted, to the first course of lectures, and which so appropriately represented a just tribute to a great master and kind friend, from a distinguished and favoured pupil, were now to listen to a discourse which was so charged with various shades and descriptions of ridicule and invective, as scarcely to be paralleled in the whole history of literary or scientific controversy. We have recently again perused the respective Lectures, and we are utterly at a loss to understand how the most sensitive mind could have found anything in Mr. Abernethy's Lectures to call for such a " Reply." As it appears to us, its very virulence was calculated to weaken its force, and to enlist the sympathies of people on the opposite side. We again forbear quotation. All we have to do is to show that circumstances of very unusual provocation, such as no man living could help feeling most deeply, and which bore on one who was acutely sensitive, never materially disturbed the native benevolence of Abernethy's disposition.

The dispute, however, soon merged into matters which the public regarded as more important. Mr. Lawrence, in the lectures which followed, took occasion to make some remarks on the Scriptures, which gave great offence, and led other writers to engage in a controversy which now assumed more of a theological than a physiological character. This, however, rather belongs to the writings and opinions of Mr. Lawrence, than to the life of Abernethy. We will therefore at once offer the very few observations which we alone think it necessary to make, either in justice to Mr. Abernethy or the profession.

CHAPTER XX.

> "Love all, trust a few,
> Do wrong to none: be able for thine enemy
> Rather in power than use; and keep thy friend
> Under thine own Life's key: be check'd for silence,
> But never tax'd for speech. What Heaven more will,
> That thee may furnish, and my prayers pluck down,
> Fall on thy head!"
>
> ALL'S WELL THAT'S ENDS WELL.

IN reviewing the facts of the foregoing controversy, we are anxious to restrict our remarks to such points as fall within the proper scope of our present object. These appear to us to relate to the mode in which Mr. Abernethy conducted his argument, as being legitimate or otherwise; secondly, the influence the whole affair had in developing one of the most important features in his character; and, lastly, the impression it produced, for good or evil, on the public mind, in relation to our profession.

We would observe, in the first place, that the difficulty of Mr. Abernethy's position was very painful and peculiar. We are not learned in controversy; but we should imagine that position to have been almost without parallel. Mr. Lawrence had been his pupil. As we have seen, Mr. Abernethy had been his patron and his friend; and, moreover, he had been not a little instrumental in placing Mr. Lawrence in the Professor's chair. This instrumentality could not have been merely passive. Mr. Abernethy himself was not a senior of the Council at that time. At all events, he was associated at the College with men much older than himself, and must have owed any influence in the appointment to an active expression of his wishes, supported by that attention to them which, though not necessarily connected with his standing at the College, was readily enough, no doubt, conceded to his talents and his reputation. His singleness of mind in this business was the more amiable, because, had he been disposed to be inactive, there were not wanting circumstances which might not unnaturally have induced some hesitation on the subject. In the postscript at the end of Mr. Abernethy's published Lectures, delivered at the College, we learn that, " From an early " period of his studies, Mr. Lawrence had been accustomed to " decry and scoff at what I taught as Mr. Hunter's opinions res- " pecting life and its functions; yet," he adds, " as I never could " find that he had any good reason for his conduct, I continued " to teach them in the midst of the controversy, and derision of " such students as had become his proselytes," &c.

This could hardly have been very agreeable. The pupils were wont to discuss most subjects in their gossips in the Square of the hospital, or elsewhere; and many a careless hour has not been unprofitably so employed. On such occasions, those who were so inclined would no doubt use ridicule, or any other weapon that suited their purpose; and so long as any reasonable limits were observed, Mr. Abernethy was the last person likely to take notice of anything which might have reached him on the subject. On the contrary, it was his excellence, and his often-expressed wish that we should canvass every subject for ourselves; and he would enforce the sincerity of his recommendation by advising us with an often-repeated quotation:

> " Nullius addictus jurare in verba magistri."

Still, we cannot conceive that the desultory discussions at the hospital, of which he might from time to time have accidentally heard, could have prepared him to expect that a similar tone was to form any portion of the sustained compositions of Lectures to be delivered in Lincoln's Inn Fields. When, however, he found his opinions ridiculed there, by his friend and pupil, what was to be done? Was he to enter into a direct personal sort of controversy with his colleague in office at the College of Surgeons?

There was everything in that course that was inexpedient and repulsive. Was he to be silent on opinions which he *knew* to have been Mr. Hunter's, and of the moral and scientific advantages of which he had a most matured conviction? That would have been a compromise of his duty. It was a difficult dilemma—a real case of the

> "Incidit in Scyllam qui vult vitare Charybdim."

If he avoided one difficulty, he fell into another. He tried to take a middle course—he argued in support of the opinions he had enunciated, and aided these by additional illustrations; and, in contrasting them with those opinions which were opposed to him, he endeavoured to avoid a personal allusion to individuals, by arguing against a class, which he termed the "band of modern sceptics." Even this was a little Charybdis, perhaps; because it had a sort of name-calling effect, whilst it was not at all essential thus to embody in any one phrase the persons who held opposite opinions.

His position was intensely difficult. It should be recollected that Abernethy had always been a teacher of young men; that he had *always* taught principles of surgery which he conceived to be deducible from those delivered by Hunter; that he further believed that, to understand Hunter clearly, it was necessary to have a correct notion of the idea Mr. Hunter entertained of "Life;" and lastly, that, in *all* his Lectures, Abernethy had a constant tendency to consider, and a habit of frequent appeal to, what, under different forms, might be regarded as the moral bearings of any subject which might be under discussion. We readily admit that, usually, in conducting scientific *arguments,* the alleged moral tendencies of this or that view are more acceptable when reserved to grace a conclusion, than when employed to enforce an argument; yet we think that, now, comparatively few persons would think the discussion of any subject bearing on the physical nature of Man, complete, which omitted the very intimate and demonstrable relations which exist between the moral and the physiological laws.

The point, however, which we wish to impress, is, that Mr. Abernethy, in pleading the moral bearings of Hunter's views by deductions of his own, was simply following that course which he *had been in the habit* of doing on most other questions; it was merely part of that plan on which, without the smallest approach at any attempt to intrude religious considerations inappropriately into the discussion of matters ordinarily regarded as secular, he had always inculcated a straightforward, free-from-cant, do-as-you-would-be-done-by tone in his own Lectures. This, while it formed one of their brightest ornaments, was just that without which all lectures must be held as defective, which are addressed to young men about to enter an arduous and responsible profession.

Abernethy stated nothing as facts but which were demonstrably such; and with regard to any hypotheses which he employed in aid of explaining them, he observed those conditions which philosophers agree on as necessary, whether the hypotheses be adopted or otherwise. He did not do even this, but for the very legitimate object of explaining the views of the man on whose labours he was discoursing.

When those views of Mr. Hunter, which had been thus set forth and illustrated, were attacked, he defended them with his characteristic ability; and although we will not undertake to say that the defence contains no single passage that might not as well have been omitted, we are not aware that, from the beginning to the end, it is charged with a single paragraph that does not fall fairly within the limits that the most stringent would prescribe to scientific controversy.

The discussion of abstract principles is generally unprofitable. We think few things more clear than that we know not the intrinsic nature of *any* abstract principle; and although it would be presumptuous to say we never shall, yet we think it impossible for any reflecting student in any science to avoid perceiving that there are peculiar relations between the *laws* of nature and the human capacity, which most emphatically suggest that the study of the one is the *proper business*, and the *prescribed limit* to the power, of the other.

Still, the poverty of language is such, as regards the expression of natural phenomena, that necessity has obliged us to clothe

the forces in nature with some attribute sufficiently in conformity with our ideas to enable us to give them an intelligible expression; and, whether we talk of luminous particles, ethereal undulations, electric or magnetic fluids, matter of heat, &c. we apprehend that no one now means more than to convey an intellectually tangible expression, of certain *forces* in nature, of which he desires to discourse; in order to describe the *habitudes* they observe, or the laws which they obey. This is all we think it necessary to say on the scientific conduct of the argument by Abernethy.

The public have long since expressed their opinion on Mr. Lawrence's Reply and Lectures; and whatever may be regarded as their decision, we have no disposition to canvass or disturb it. There was nothing wonderful, however unusual, in a young man so placed, in a profession like ours, getting into a controversy with a man of such eminence as Abernethy, particularly on speculative subjects. There were in the present case, to be sure, very many objections to such a position; but these it was Mr. Lawrence's province to consider. On this, and many other points, we have as little inclination as we have right, perhaps, to state our opinion. Nevertheless, we must not omit a few words in recognition of Mr. Abernethy's efforts, and a few observations on the conduct of the governing body of the College at that time. In the first place, we feel obliged to Mr. Abernethy for the defence he made on that occasion: not from the importance of any abstract theory, but from the tendency that his whole tone had to inculcate just views of the nature and character of the profession. But we can by no means acquit the Council of the College, at the time of the said controversy, of what we must conceive to have been a great neglect of duty. There is, amongst a certain class of persons, an idea that the medical profession are sceptical on religious subjects; and many of these persons are people of whom it is impossible not to value the respect and good opinion. We never could trace any *legitimate* grounds for the conclusion. On inquiry, it has always appeared to be nothing more than a "vulgar error," resting, as "vulgar errors" generally do, on general conclusions drawn by people who have deduced them from insufficient particulars.

Sometimes, the persons indulging in this idea have known a medical man whom *they consider* to be unstable in his religious views; another knows that Mr. A. or B. never goes to church; sometimes, even political differences have been held sufficient excuse for impugning the soundness of a man's ideas on the all-important subject of religion. We have never been able to discover any grounds on which they could, with any show of justice, support so serious an imputation. For our parts, we know not how the necessary data are to be obtained, and therefore should shrink from anything so presumptuous as an attempt to describe the religious character of any profession.

We have no means of obtaining the evidence necessary even to examine, much less to support, so serious and difficult a generalization. The great bulk of our profession are general practitioners; and in forming opinions in regard to any class of men, we naturally look to the greatest number. So far as our own experience has gone, we cannot find the slightest ground for the degrading imputation. Like all other medical men, their labours are incessant, their hours of recreation few, and far between. In their requisitions on their time, the public regard neither night nor day, nor the Sabbath, when they require attention. Then, if we look to conduct as no unreasonable test of religion, we may, like all other professions, have blots. We have, in all grades, it may be, our fee-hunters and long-billed practitioners; but whether we regard the physician, surgeon, or general practitioner, we verily believe that there are no men in the kingdom who, as a body, conduct themselves more honourably, none who are less mercenary, none who, in relation to their position, are less affluent—no bad test—nor who do one-tenth of the work which they do, without any remuneration whatever.

With regard to the alleged absence from public worship, there may be (however explicable) some ground for the remark, and especially as no profession shows, in the general respectability of their conduct, a more ready and respectful acquiescence in the established usages of mankind.

But let the question be fairly stated. How many medical men can go to church every Sunday, and to the same church, without a compromise of a paramount duty? We are ready to concede, that the necessities which professional calls impose on so many occasions, may have a tendency to form habits, when impediments are less pressing; but is it not rather the exactions of the public, than the choice of the profession, which imposes the necessity? How many of the public would be satisfied, if they wished to see a professional man on any pressing occasion, and were told that he could not be seen for a couple of hours, as he was going to church?

Highly as we venerate the benign and beautiful ordinance of the Sabbath, important as we think it, that, on all accounts, it should be observed with reverence and gratitude,—still we should hesitate before we regarded the single act of attendance or absence on public worship as a safe or charitable exposition of any man's religious stability. We, therefore, as far as in us lies, repudiate the charge; we regard it as groundless; and think that, as no profession affords more frequent opportunities for a constant awakening and keeping alive the best sympathies of our nature, so no profession can be more calculated to impress the fragile nature of the body, as contrasted with the immortal spirit which inhabits it, or the constant presence of that Power by whose laws they are both governed. But groundless as we think the charge, we must contend that the apathy of the Council of the College, at the time Mr. Lawrence delivered the lectures in question, was a serious neglect of duty. In those Lectures, Mr. Lawrence spoke of the Old Testament in a tone which must, we think, be regarded as irrelevant to, or at least unnecessary in, a course of Lectures on Comparative Anatomy.

We hold no sympathy with that sort of persecution with which several well-intentioned people visited the book; but we must always regard the Council of the time as having been neglectful of their duty. Lectures on Comparative Anatomy do not render it necessary to impugn the historical correctness, or the inspired character, of the Old Testament. What answer could private individuals make, or with what influence could they oppose the prejudices of the public in relation to the religious securities afforded by men in whom they confide, when they saw a young professor allowed to introduce into lectures—given to an audience composed of the most aged and eminent of the profession, as well as of many of those who were just commencing their studies, delivered, too, at the chartered College of the profession—matter which was not only not at all necessary to the most ample exposition of the subject, but which, as we have said, only alluded to the Old Testament in a manner calculated to weaken its authority as an historical document, and to impugn its inspired character?

Surely there was no more certain mode of giving an *ex cathedrâ* sanction to the unfavourable impressions of the public; impressions which tend to tarnish the lustre of a profession which founds its claim to respect on its high office in kindly ministrations and unquestioned utility; and to arm a vulgar and unfounded prejudice with all the influence of Collegiate recognition. If, indeed, the College had desired to support the alleged favourable tendency of Mr. Abernethy's views, or the alleged opposite bearings of those to which he was opposed, they could hardly have done better than to have allowed of the irrelevant matter in question. But we have done. It is no part of our business to quote passages, or further to renew discussions long since passed away, than is necessary for our proper objects. But when we consider on how many points Abernethy must have been hurt, the very difficult and perplexing position in which he was placed, we cannot too much admire the very measured tone he adopted throughout; or the evidently wounded feeling, but still dignified yet simple statement in the published Postcript in his Lectures; and though there had been no subsequent exemplification of his forgiving temper—which was not the case—we should still have felt obliged to regard the whole affair as indicative of great goodness of heart; and, when all the circumstances of disappointment and vexation are duly weighed, of almost unexampled moderation.

It is just to Mr. Lawrence to observe, that, some few years after this, the Governors of Bethlem Hospital, on the annual (and usually formal) election of the surgeon, an office held by Mr. Lawrence, threw the appointment open to competition; on which occasion Mr. Lawrence published a letter expressing regret, in general terms, as to certain passages in the Lectures in question, and his determination not to publish any more on similar subjects. The coincidence of this letter with the threatened tenure of office, of course gave rise to the usual remarks; but, if a man say he is sorry for a thing, perhaps it is better not to scan motives too closely. Mankind stand too much in need of what Burns suggests, and with which we close this not very agreeable subject :

> " Then gently scan your brother man,
> " Still gentler sister woman ;
> " Though they may gang a kennin wrang,
> " To step aside is human."

CHAPTER XXI.

> "And though they prove not, they confirm the cause,
> When what is taught agrees with Nature's laws."
>
> DRYDEN'S RELIG. LAICI.

PREFATORY REMARKS.

IN endeavouring to give some idea of Abernethy's manner in more sustained compositions, we have made some selections from the Lectures he delivered at the College of Surgeons. Without any pretensions to a critically faultless style, there always seemed to us to be a peculiar simplicity, combined with a broad and comprehensive range of thought. Sometimes, too, he has almost a "curiosa felicitas" in the tone of his expressions; though this was more remarkable, we think, when he felt more free; that is, in his unrivalled teaching at the Hospital, of which we shall endeavour to give a more particular account. As we have before remarked, it is impossible to do full justice to Abernethy, unless we were to publish his works, with a running commentary; and we fear that in the selections we offer we have incurred a responsibility which we shall not properly fulfil. To convey the full, the suggestive merit of even some of the following passages, it would be necessary to state carefully the relation they bear to the state of science, both chemical and physiological, at the time they were written, and the present.

The interest of the Lectures is so evenly distributed through the whole, that selection is very difficult; and being obliged to consider our limits, we have, in the absence of a better guide, selected the passages at random, as suggested by our own impressions of them. We therefore can only earnestly recommend the perusal of the Lectures themselves, as equally entertaining and instructive to the general as well as the professional reader. The varied expression and manner, and his fine intellectual countenance, by which he imparted so much interest to his delivery on every subject he touched, will be considered in connection with his success in the art of lecturing, to which these somewhat formal specimens may serve as an introduction.

THE APPARENT UNIVERSAL DISTRIBUTION OF SOME POWERFUL FORCE LIKE ELECTRICITY, MAGNETISM, ETC.

" When, therefore, we perceive in the universe at large a " cause of rapid and powerful motions of masses of inert matter, " may we not naturally conclude that the inert molecules of vege- " table and animal matter may be made to move in a similar " manner by a similar cause ?"

REPUDIATION OF AN OFTEN-ALLEGED OPINION.

" It is not meant that electricity is life. There are strong " analogies between electricity and magnetism ; and yet I do not " know that any one has been hardy enough to assert their abso- " lute identity*. I only mean to prove that Mr. Hunter's theory " is verifiable, by showing that a subtile substance of a quickly, " powerfully mobile nature seems to pervade everything, and ap- " pears to be the life of the world ; and therefore it is probable " that a similar substance pervades organized bodies, and pro- " duces similar effects in them."

" The opinions which, in former times, were a justifiable hy- " pothesis, seem to me now to be converted into a rational " theory†."

IN RELATION TO MICROSCOPIC OBSERVATION.

" This general and imperfect sketch of the anatomy of the " nervous system relates only to what may be discovered by " our unassisted sight. If by means of the microscope we en-

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* Oersted's experiments, which by some are regarded as identifying these powers, occurred in 1820, four or five years after the delivery of this Lecture.

† Anatom. Lect. I, p. 51.

" deavour to observe the ultimate nervous fibres, persons in general are as much at a loss as when, by the same means, they attempt to trace the ultimate muscular fibres*."

ILLUSTRATION, OF MOTION NOT NECESSARILY IMPLYING SENSATION.

" Assuredly, motion does not necessarily imply sensation; it takes place where no one ever yet imagined there could be sensation. If I put on the table a basin containing a saturated solution of salt, and threw into it a single crystal, the act of crystallization would begin from the point touched, and rapidly and regularly pervade the liquor till it assumed a solid form. Yet I know I should incur your ridicule if I suggested the idea that the stimulus of salt had primarily excited the action, or that its extension was the effect of continuous sympathy. If, also, I threw a spark amongst gunpowder; what would you think, were I to represent the explosion as a struggle resentful of injury, or the noise as the clamorous expression of pain†?"

DIFFERENT NERVOUS SYSTEMS VARIOUSLY AFFECTED BY SIMILAR IMPRESSIONS.

" Thus the odour of a cat, or the effluvia of mutton, the one imperceptible, the other grateful to the generality of persons, has caused individuals to fall on the ground as though bereaved of life, or to have their whole frame agitated by convulsions. Substances which induce disease in one person or animal, do not induce disease in others‡."

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* Anat. Lect. II, p. 62. † Ibid. p. 84. ‡ Ibid. p. 85.

IMPORTANCE OF OPINIONS.

“ Thinking being inevitable, we ought, as I said, to be solici-
“ tous to think correctly. Opinions are equally the natural result
“ of thought, and the cause of conduct. If errors of thought
“ terminated in opinions, they would be of less consequence; but
“ a slight deviation from the line of rectitude in thought may
“ lead to a most distant and disastrous aberration from that line
“ in action. I own I cannot readily believe any one who tells
“ me he has formed no opinion on subjects which must have en-
“ gaged and interested his attention. Persons both of sceptical
“ and credulous characters form opinions, and we have in general
“ some principal opinion, to which we connect the rest, and to
“ which we make them subservient; and this has a great influence
“ on all our conduct. Doubt and uncertainty are so fatiguing
“ to the human mind, by keeping it in continual action, that it
“ will and must rest somewhere; and if so, our inquiry ought to
“ be where it may rest most securely and comfortably to itself,
“ and with most advantage to others.

“ In the uncertainty of opinions, wisdom would counsel us
“ to adopt those which have a tendency to produce beneficial
“ actions.”

INDEPENDENCE OF MIND ON LIFE AS ARISING OUT OF THE IDEA THAT LIFE WAS SUPERADDED TO ORGANIZATION—HIS DISPOSITION TO ALLEGORY.

“ If I may be allowed to express myself allegorically with
“ regard to our intellectual operations, I would say that the mind
“ chooses for itself some little spot or district, where it erects a
“ dwelling, which it furnishes and decorates with the various ma-
“ terials it collects. Of many apartments contained in it, there
“ is one to which it is most partial, where it chiefly reposes, and
“ where it sometimes indulges its visionary fancies. At the same

" time, it employs itself in cultivating the surrounding grounds, " raising little articles for intellectual traffic with its neighbours, " or perhaps some produce worthy to be deposited amongst the " general stores of human knowledge. Thus my mind rests at " peace in thinking on the subject of life, as it has been taught " by Mr. Hunter; and I am visionary enough to imagine that if " these opinions should become so established as to be generally " admitted by philosophers, that if they once saw reason to be- " lieve that life was something of an invisible and active nature " *superadded* to organization, they would then see equal reason " to believe that mind might be superadded to life, as life is to " structure. They would then, indeed, still further perceive how " mind and matter might reciprocally operate on each other by " means of an intervening substance. Thus, even, would phy- " siological researches enforce the belief which I say is natural to " man: that, in addition to his bodily frame, he possesses a sen- " sitive, intelligent, and *independent* mind—an opinion which " tends in an eminent degree to produce virtuous, honourable, " and useful actions*."

ATTRACTIONS OF PAYSIOLOGY—THE NECESSITY OF EXAMINING BOTH HEALTH AND DISEASE A VERY IMPORTANT POINT JUST NOW, AS TESTING THE VALIDITY OF CERTAIN VIEWS OF LIEBIG AND OTHERS.

" No study can surely be so interesting as Physiology. Whilst " other sciences carry us abroad in search of objects, in this we " are engaged at home, and on concerns highly important to us, " in inquiring into the means by which 'we live, and move, and " 'have our being.' To those, however, engaged in the practice " of Medicine, the study of Physiology is indispensable; for it is " evident that the nature of the disordered actions of parts or " organs can never be understood or judiciously counteracted,

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* Anat. Lect. II, p. 92.

“ unless the nature of their healthy actions be previously “ known.

“ The study of Physiology, however, not only requires that “ we should investigate the nature of the various vital processes “ carried on in our own bodies, but also that we should compare “ them with similar processes in all the varieties of living beings; “ not only that we should consider them in a state of natural and “ healthy action, but also under all the varying circumstances of “ disorder and disease. Few indeed have studied Physiology “ thus extensively, and none in an equal degree with Mr. Hunter. “ Whoever attentively peruses his writings, must, I think, per- “ ceive that he draws his crowds of facts from such different and “ remote sources, as to make it extremely difficult to assemble “ and arrange them[*].”

OF DISORDER AND DISEASE.

“ Disorder, which is the effect of faulty actions of *nerves*, in- “ duces disease, which is the consequence of faulty actions of the “ *vessels*. There are some who find it difficult to understand “ how similar swellings or ulcers may form in various parts of “ the body in consequence of general nervous disorder, and are “ all curable by appeasing and removing such general disorder. “ The fact is indisputable. Such persons are not so much sur- “ prised that general nervous disorder should produce local effects “ in the nervous and muscular systems; yet they cannot so well “ understand how it should locally affect the vascular system. To “ me there appears nothing wonderful in such events; for the “ local affection is primarily nervous, and the vascular actions are “ consequent. Yet it must indeed be granted that there may be “ other circumstances leading to the peculiarities of local diseases, “ with which, at present, we are unacquainted. Disorder excites “ to disease, and when *important organs* become in a degree dis-

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[†] Physiol. Lect. I, p. 3. 1817.

" eased, they will still perform their functions moderately well, " *if disorder* be relieved, which *ought to be the Alpha and Omega* " *of medical attention**."

As we have seen, in the early part of our narrative, he was one of the first to insist on the importance of Comparative Anatomy and Physiology, and, as we shall have to relate, most active in securing what has proved so greatly influential to its progress in this country (the appointment of Professor Owen). Yet he modestly ignores any positive pretensions which might be imputed to him from his endeavour to illustrate a Museum dealing so largely with Comparative Anatomy.

" Gratitude to the former of the Museum, and also to the " donors to it, equally demand that its value and excellency " should be publicly acknowledged and displayed, which consider- " ation has goaded me on to undertake and imperfectly execute a " task for which I feel myself not properly qualified."

Here follows what is very candid in Abernethy, and honourable to Mr. Clift, who had very many debtors who were less communicative.

" I cordially acknowledge that I have little acquaintance with " the subject, except what I derived from looking over the pre- " parations in the Museum, from reading Professor Cuvier's Lec- " tures, and from the frank and friendly communications of our

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* Introd. Lect. p. 117. 1815.

" highly praiseworthy conservator, Mr. Clift. Permit me to say, " gentlemen, though many know it already, that Mr. Clift resided " with Mr. Hunter, and was taught by him to exhibit anatomical " facts in preparations,—that he does credit to his excellent in- " structor,—that he feels the same interest and zeal that his " patron did for the improvement of this department of science,— " and that he possesses the same candour and simplicity of cha- " racter*."

OF DEEP AND SUPERFICIAL THINKING.

" I now beg leave to add that there are many who think " clearly, who do not think deeply; and they have greatly the " advantage in expressing themselves, for their thoughts are gene- " rally simple and easy of apprehension. Opinions immediately " deduced from any series or assemblage of facts may be called " primary opinions, and they become types and representatives " of the facts from which they are formed, and, like the facts " themselves, admit of assortment, comparison, and inference; so " that from them we deduce ulterior opinions, till at length, by " a kind of intellectual calculation, we obtain some general total, " which in like manner becomes the representative and co-efficient " of all our knowledge, with relation to the subject examined and " considered.

" In proportion to the pains we have taken in this algebraical " process of the mind, and our assurance of its correctness, so do " we contemplate the conclusion or consummation of our labours " with satisfaction†."

CHARACTERISTIC OF HIS INCLINATION TO THE LAW.

" Gentlemen (of the jury), I trust I can prove to your perfect " conviction, by ample and incontrovertible evidence, that my

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* Physiol. Lect. I, p. 14.

† Ibid. p. 22.

" client (John Hunter) died seized and possessed of very con- " siderable literary property, the hard-earned gainings of great " talent and unparalleled industry. It is not, however, for the " property that I plead; because already that is secured; it is " fenced in; land-marks are set up; it is registered in public " documents. I plead only for the restitution of a great and " accumulated income of reputation derivable from that property, " which, I trust, you will perceive to be justly due, and will con- " sequently award to my client, and his country*."

OF MR. HUNTER—PROGRESS OF HIS MIND, ETC.

" Believing that no man will labour in the strenuous and un- " remitting manner that Mr. Hunter did, and to the detriment of " his own private interest, without some strong incentive; I have " supposed that at an early period he conceived those notions of " life which were confirmed by his future inquiries and experi- " ments. He began his observations on the incubated egg, in " the year 1755, which must either have suggested or corrobo- " rated all his opinions with regard to the cause of the vital phe- " nomena. He perceived that, however different in form and " faculty, every creature was nevertheless allied to himself, because " it was a living being; and therefore he became solicitous to " inquire how the vital processes were carried on in all the vari- " eties of animal and even vegetable existence."

OF GENIUS AND JUDGMENT.

" In the progress of science, genius with light and airy steps " often far precedes judgment, which proceeds slowly, and either " finds or forms a road along which all may proceed with facility

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* Physiol. Lect. I, p. 16.

“ and security; but the *direction* of the course of judgment is
“ often suggested, and its actions are excited and accelerated, by
“ the invocations of preceding genius*.”

REITERATION OF THE DENIAL THAT HE IDENTIFIED LIFE WITH ELECTRICITY.

“ As Sir H. Davy’s experiments fully prove that electricity
“ may be superadded to, and that it enters into, the composition
“ of all those substances we call matter, I felt satisfied with the
“ establishment of the philosophy of Mr. Hunter’s views, nor
“ thought it necessary to proceed further, but merely added: ‘ It
“ ‘ is not meant to be affirmed that electricity is life.’ I only
“ mean to argue in favour of Mr. Hunter’s theory, by showing
“ that a subtile substance of a quickly and powerfully mobile
“ nature seems to pervade everything, and appears to be the life
“ of the world; and that therefore it is probable a similar sub-
“ stance pervades organized bodies, and is the life of these bodies.
“ I am concerned, yet obliged, to detain you by this recapitula-
“ tion, because my meaning has been either misunderstood or
“ misrepresented*.”

CHEMISTRY OF LIFE.

“ He (Mr. Hunter) told us that life was a great chemist,
“ and, even in a seemingly quiescent state, had the power of re-
“ sisting the operations of external chemical agency, and thereby
“ preventing the decomposition of those bodies in which it re-
“ sided. Thus seeds may lie buried far beneath the surface of
“ the earth for a great length of time without decaying, but being
“ thrown up, they vegetate. Mr. Hunter showed us that this

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* Physiol. Lect. I, p 19. † Ibid. p. 26.

" chemist, 'Life,' had the power of regulating the temperature of " the substances in which it resides*."

INTERESTING; ALSO SIGNIFICANT IN REGARD TO WHAT ARE PROBABLY THE REAL SOURCES OF ANIMAL HEAT, AND IN RELATION TO THE LUNGS, WHICH WE HAVE CONTENDED ARE REFRIGERATING AND NOT HEATING ORGANS.

" The progress of science since Mr. Hunter's time has " wonderfully manifested that the beam, when dissected by a " prism, is not only separable into seven calorific rays of different " refrangibility, producing the iridescent spectrum, but also into " calorific rays refracted in the greatest degree or intensity beyond " the red colour, and into rays not calorific, refracted in like " manner, to the opposite side of the spectrum beyond the violet " colour; and that the calorific and uncalorific rays produce " effects similar to those occasioned by the two kinds of electricity; " and thus afforded additional reasons for believing that subtile, " mobile substances do enter into the composition of all those " bodies which the sun illumines, or its beams can penetrate.

" Late observations induce the belief that even light may be " incorporated in a latent state with animal substances and afterwards elicited by a kind of spontaneous separation by vital " actions, or by causes that seem to act mechanically on the substance in which it inheres. All the late discoveries in science " seem to realize the speculations of ancient philosophers, and " show that all the changes and motions which occur in surrounding bodies, as well as those in which we live, are the effect of " subtile and invisible principles existing in them, or acting on " them. Mr. Ellis, who, with such great industry and intelligence, has collated all the scattered evidences relative to the " production of heat in living bodies, and added so much to the " collected knowledge, seems to think that all the variations of

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* Physiol. Lect. I, p. 27.

"temperature in them may be accounted for by known chemical "processes.

"Here, however, I must observe, that Mr. Hunter's opinion "of life having the power of regulating temperature was deduced, "not only from his own experiments, related in the 'Philosophical Transactions,' but also from observing, that, in certain "*affections of the stomach, the heat of the body is subject to great* "*vicissitudes, whilst respiration and circulation remain unaltered;* "and also that parts of the body are subject to similar variations, "which appear inexplicable upon any other supposition than that "of *local nervous excitement,* or torpor, or some similar affec- "tions of the vital powers of the part which undergoes such "transitions*."

ALLEGED TENDENCIES OF A BELIEF IN THE INDEPENDENT NATURE OF MIND.

"It is equally apparent that the belief of the distinct and "independent nature of mind incites us to act rightly from prin- "ciple; to relieve distress, to repel aggression, and defend those "who are incapable of protecting themselves; to practise and "extol whatever is virtuous, excellent, and honourable; to shun "and condemn whatever is vicious and base, regardless also of "our own personal feelings and interests when put in competition "with our duty †."

OF PHRENOLOGY.

"There is nothing in the assertions of Drs. Gall and Spurz- "heim contradictory to the results of general observation and "experience. It is admitted that the superior intellectual

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* Physiol. Lect. I, p. 37. † Physiol. Lect. I, p. 51.

" faculties can and ought to control the inferior propensities. " It is admitted that we possess organs, which, nevertheless, may " be inactive from general torpor or want of education. General " observation and experience proclaim that susceptibility is the " chief incentive to action, that it is the source of genius; and " that the character of the man greatly depends on his education " and habits. We educate our faculties; what is at first accom- " plished with difficulty, by repetition is easily performed, and " becomes more perfect and established by habit. Trains of per- " ceptions and thoughts also become firmly concentrated, and " occur in succession. Even our feelings undergo the same kind " of education and establishment. Casual feelings of goodwill " by repetition strengthen and produce lasting friendships; whilst " trivial sensations of disgust, in like manner, may occasion in- " veterate hatred."

ON THE SAME.

" Should the result of our general inquiries, or attention to " the subjects proposed to us by Drs. Gall and Spurzheim, induce " us to believe that the peculiarities of our feelings and faculties " were the effects of variety of excitement, transmitted through " a diversity of organization, they would tend to produce mutual " forbearance and toleration. We should perceive how nearly " impossible it must be that any persons should think and feel " exactly alike upon any subject. We should not arrogantly " pride ourselves on our own virtue and knowledge, nor condemn " the errors and weakness of others, since they may depend upon " causes which we can neither produce nor readily counteract. " The path of virtue is plain and direct, and its object distinctly " before us; so that no one can miss either, who has resolution " enough never to lose sight of them, by adverting to advantages " and allurements with which he may be presented on the one hand, " or the menacings with which he may be assailed on the other. " Yet no one, judging from his own feelings and powers, can be

" aware of the kind and degree of temptation or terror, or the " seeming incapacity to resist them, which may have induced " others to deviate. Now, though from the foregoing considera- " tions, I am pleased with the speculations of Drs. Gall and " Spurzheim, I am quite incompetent to give any opinion as to " the probability of what they have suggested; because I see no " mode by which we can with propriety admit or reject their " assertions, except by pursuing the same course of investigations " which they themselves have followed; a task of great labour " and difficulty, and one which, for various reasons, I should feel " great repugnance to undertake*."

Abernethy used to like very well to talk with Spurzheim, who resided for some time in this country. One day, Abernethy, half-seriously, half-humorously said to Spurzheim: "Well, Doctor, where do you place the organ of common sense?" Spurzheim's reply certainly sustained the coincidence of phrenological deductions with those of experience. "There is no organ," said he, "for common sense, but it depends on the equilibrium of the other organs."

THEOLOGICAL APPLICATION OF ANATOMICAL FACTS.

" Therefore, from this least interesting part of anatomy, we " derive the strongest conviction of there being design and con- " trivance in the construction of animals. Equal evidences of " design and contrivance and of adaptation of means to ends may " be observed in the construction of the frame-work, as I may " call it, of other animals, as in that of man, which subject seems " to me very happily displayed in Professor Cuvier's Lectures†."

" It was, however, the comparing the mechanism of the hand

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* Physiol. Lect. III, p. 99. † Physiol. Lect III, p. 151.

" and foot that led Galen, who they say was a sceptic in his " youth, to the public declaration of his opinion that intelligence " must have operated in ordaining the laws by which living " beings are constructed. That Galen was a man of a very " superior intellect could readily be proved, were it necessary. I " have often known the passage I allude to made a subject of " reference, but not of quotation, and therefore I recite it on the " present occasion, and particularly because it shows that Galen " was not in the least degree tinctured with superstition. 'In " 'explaining these things,' he says, 'I esteem myself as com- " 'posing a solemn hymn to the great Architect of our bodily " 'frame, in which I think there is more true piety than in " 'sacrificing whole hecatombs of oxen, or in burning the most " 'costly perfumes; for, first, I endeavour from His works to know " 'Him myself, and afterwards by the same means to show Him " 'to others, to inform them how great is His wisdom, goodness, " 'and power*.' "

DISTINCTIVE CHARACTER OF LIVING BODIES.

" Those bodies which we call living are chiefly characterized " by their powers of converting surrounding substances into their " own nature, of building up the structure of their own bodies, " and repairing the injuries they may accidentally sustain†."

IN REPUDIATION OF CRUELTY AND EXPERIMENTS ON ANIMALS.

Very important in our view. The objection was very new at that time, and has made very little way yet. We have already referred to this subject. Considering the period of these Lectures (nearly forty years ago), Abernethy's objections, though cautious, are very sound, and, for him, very positive. We know that he felt still more strongly.

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* Physiol. Lect. III, p. 152. † Physiol. Lect. IV, p. 155.

" Mr. Hunter, whom I should not have believed to be very " scrupulous about inflicting sufferings upon animals, nevertheless " censures Spalanzani for the unmeaning repetition of similar " experiments. Having resolved publicly to express my own " opinion with respect to this subject, I choose the present oppor- " tunity to do it, because I believe Spalanzani to have been one " of those who have tortured and destroyed animals in vain. I " do not perceive that in the two principal subjects which he " sought to elucidate, he has added any important fact to our " stock of knowledge; besides, some of his experiments are of a " nature that a good man would have blushed to think of, and a " wise man ashamed to publish, for they prove no fact requiring " to be proved, and only show that the aforesaid Abbé was a " filthy-minded fellow."

ON THE SAME.

" The design of experiments is to interrogate nature; and " surely the inquirer ought to make himself acquainted with the " language of nature, and take care to propose pertinent questions. " He ought further to consider the probable kind of replies that " may be made to his inquiries, and the inferences that may be " warranted in drawing from different responses, so as to be able " to determine whether, by the commission of cruelty, he is likely " to obtain adequate instruction. Indeed, before we make ex- " periments on sensitive beings, we ought further to consider " whether the information we seek may not be attainable by other " means. I am aware of the advantages which have been derived " from such experiments when made by persons of talent, and " who have properly prepared themselves; but I know that these " experiments tend to harden the feelings which often lead to the " inconsiderate performance of them.

" Surely we should endeavour to foster, and not stifle, bene-

"volence, the best sentiment of our nature, that which is productive of the greatest gratification both to its possessor and to others. *Considering the professors in this place as the organs of the Court of the College,* addressing its members, I feel that I act as becomes a senior of this institution, whilst admitting the propriety of the practice under the foregoing restrictions, I, at the same time, express an earnest hope that the character of an English surgeon may never be tarnished by the commission of inconsiderate or unnecessary cruelty*."

A VERY EARLY EXCELLENCE OF ABERNETHY: EXCEEDINGLY NECESSARY AT ONE TIME IN RELATION TO THE ERRONEOUS NOTIONS ON WHICH ANATOMICAL INVESTIGATIONS WERE CONDUCTED; ADVANCING SCIENCE HAS FULLY CONFIRMED THE JUSTICE AND GOOD SENSE OF HIS REMARKS.

"To me, however, who confide more in the eye of reason than in that of sense, and would rather form opinions from analogy than from the imperfect evidence of sight, it seems too hasty an inference to conclude that, in the minute animals, there are no vessels nor other organization because we cannot see them, or that polypes are actually devoid of vessels, and merely of the structure described, because we can discern no other. Were it, however, really so, such facts would then only show with how little and with what various organization life could accomplish its principal functions of assimilation, formation, and multiplication. Who has seen the multitudinous distribution of absorbing vessels, and all the other organization, which doubtless exists in the vitreous humour of the eye, than which no glass ever appeared more transparent or more seemingly inorganic†? How strange is it that anatomists, above all other members of the community of science, should hesitate to admit the existence of what they cannot discern, since they, more

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* Physiol. Lect. IV, p. 164.

† Physiol. Lect, V, p. 203.

" than all the rest, have such constant assurance of the imper-
" fection and fallibility of sight*?"

REITERATION OF AN IMPORTANT AXIOM, QUITE NECESSARY AT THIS TIME TO THE CHEMICAL PHYSIOLOGISTS.

" Our physiological theories should be adequate to account
" for all the vital phenomena both in health *and disorder*, or they
" can never be maintained as good theories†."

OF RESPIRATION. CAUTIOUS REASONING. HAD ALL REASONED THUS, WE MIGHT HAVE ESCAPED MUCH UNSOUND THEORIZING ON THIS IMPORTANT PROCESS.

" Chemists have considered the change as contributory to the
" production of animal heat, which opinion may, indeed, be true,
" though the manner in which it produces such an effect has
" not, as yet, been explained. Mr. Hunter, who believed that
" life had the power of regulating temperature, *independently of*
" respiration, says nothing of that process as directly contributing
" to such an effect. He says: ' Breathing seems to render life
" ' to the blood, and the blood conveys it to every part of the
" ' body,' yet he believes the blood derives its vitality also from
" the food. I am at a loss to know what chemists now think
" respecting heat, whether they consider it to be a distinct species
" of matter, or mere motion and vibration. Among the curious
" revolutions which this age has produced, those of chemical
" opinions have a fair claim to distinction. To show which, I
" may add, that a lady‡, on her first marriage, was wedded to
" that scientific champion who first overthrew phlogiston, and

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* Physiol. Lect. V, p. 209. † Ibid. p. 229.

‡ Madame Lavoisier, whose celebrated husband was guillotined, afterwards married Count Rumford.

" established, in its stead, the empire of caloric; and after his " decease, on her second nuptials, was united to the man who " vainly supposed he had subverted the rule of caloric and re- " stored the ancient but long-banished dynasty of motion and " vibration. In this state of perplexity, I cannot, with prudence " or probable security, advance one step further than Mr. Hunter " has led me. I must believe respiration to be essential to life, " and that life has the power, by its actions, of maintaining and " regulating temperature*."

CHARACTERISTIC, BOTH AS TO ILLUSTRATION AND MORAL BEARING.

" Those of the medical profession must readily accord with " the remark of Shakspeare, that such affections (disturbed states " of the nervous system) which may well indeed be called " 'master passions,' sway us to their mood in what we like or " loathe. For we well know that our patients and ourselves, " from disturbance of the nervous functions of the digestive " organs, producing such affections of the brain, may become " irritable, petulant, and violent about trifles, or oppressed, morose, " and desponding. Permit me, however, to add that those of the " medical profession must be equally apprized that when the " functions of the mind are not disturbed by such affections, it " displays great energy of thought, and evidence of established " character, even in death. Have we not lately heard that the " last words of Nelson were: 'Tell Collingwood to bring the " 'fleet to an anchor?' Shakspeare has also represented Mercutio " continuing to jest, though he was mortally wounded; the expiring " Hotspur thinking of nothing but honour, and the dying Falstaff " cracking his jokes on Bardolph's nose. I request you to excuse " this digression, which I have been induced to make, from per- " ceiving that, if such facts were duly attended to, they would

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* Physiol. Lect. V, p. 237.

" prompt us to a more liberal allowance for each other's conduct, " under certain circumstances, than we are accustomed to do ; " and also incite us to the more active and constant performance " of the great business of human life—the education of the mind ; " for, according to its knowledge and dispositions, do we possess " the ability of contributing to our own welfare and comfort, and " that of others*."

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* Lect. VI, p. 257.

CHAPTER XXII.

ABERNETHY AS A TEACHER.

> "Trace Science, then, with Modesty thy guide;
> First, strip off all her equipage of pride;
> Deduct what is but vanity of dress,
> Or learning's luxury, or idleness,
> Or tricks to show the stretch of human brain,
> Mere curious pleasure, or ingenious pain."

LECTURING after a fashion is easy enough; *teaching* is a very different affair. The one requires little more than good information, some confidence, and a *copia verborum;* the other establishes several additional requisitions. These requisitions, when rendered comparatively easy by nature, are seldom perfectly matured without art and careful study. The transmission of ideas from one mind to another, in a simple, unequivocal form, is not always easy; but, in teaching, the object is not merely to convey the idea, but to give a lively and lasting impression—something that should not merely cause the retention of the image, but in such connection as to excite another process, "thought."

There was no peculiarity in Abernethy more striking than the power he possessed of communicating his ideas, and of sustaining the interest of the subject on which he spoke. For this there is no doubt he was greatly indebted to natural talent; but it is equally clear that he had cultivated it with much care. His ability as a lecturer was, we think, unique. We never saw his like before: we hardly dare hope we shall again.

There is no doubt that a great part of his success depended on a facility of giving that variety of expression, and that versatility of manner, which falls within the province of what we must call dramatic; but then it was of the very highest description, in that it was perfectly natural. It was of that kind which we sometimes find in an actor, and which conveys the impression that he is speaking his own sentiments, rather than those of the author. It is a species of talent which dies with its possessor, and cannot, we think, be conveyed by description. Still there were many things in Abernethy that were observable, and such as could hardly have been acquired without study.

If we examine any lecturer's style, and ask ourselves what is his fault, we shall find very few in whom we cannot detect one or more. When we do this, and then reflect on Abernethy, we are astonished to find how many he avoided. We shall endeavour to make this as intelligible as we can, by citing some of the points which our attention to different lecturers have suggested.

"Simplicity" has struck us as a feature which, in some sense or other, is very commonly defective. Simplicity appears so important, that perhaps, by not a very illegitimate extension of its meaning, it might be made to include almost all the requisitions of this mode of teaching. Let us think of it in relation to language and illustration. In all sciences, the *facts* are simple; the laws are yet *more so;* increasing knowledge tends to impress on us an ever-increasing and comprehensive simplicity. In explaining simple things, no doubt language should be simple too. If we employ language unnecessarily technical, we use symbols to which the learner is unaccustomed. He has not to learn the facts *only;* but he has the *additional labour* of something allied to learning it in a foreign language. The *unnecessary* use of technicalities should then surely be avoided. Abernethy was obliged to use them, because there were often no other terms; but he always avoided any needless multiplication of them. When they were difficult or objectionable, he tried some manœuvre to lighten the repulsiveness of them.

There are many muscles in the neck with long names, and which are generally given with important parts of surgical anatomy. Here he used to chat a little; he called them the *little* muscles with the *long* names; but he would add, that, after all, they were the best-named muscles in the body, because their names expressed their attachments. This gave him an excuse for referring to what he had just described, in the form of a narrative, rather than a dry repetition. Then, with regard to one muscle, that he wished particularly to impress, the name of which was longer than any of the others, he used to point it out as a striking feature in all statues; and then, repeating its attachments, and pointing to the sites which they occupied, say it was impossible to do so without having the image of the muscle before us.

In other parts of the Lectures, he would accompany the technical name by the popular one. Thus he would speak of the pancreas, or sweetbread; cartilage, or gristle. Few people are aware how many difficulties are smoothed by such simple manœuvres. Nothing interests people so much as giving anything *positive.* We think it not improbable that many a man has heard a lecture, in which animals have been described with whose habits he had been perfectly familiar, without having recognized his familiar acquaintances in the disguise afforded by a voluminous Greek compound. Abernethy seemed always to lecture, not so much as if he was telling us what he *knew,* as that which *we* did *not* know. There was an absence of all display of any kind whatever.

To hear some lecturers, one would almost think that they adopted the definition of language which is reported of Talleyrand—that it was intended to conceal our ideas. Some make simple things very much otherwise by the mode of explaining them. This reminds us of a very worthy country clergyman, in the west of England, who, happening to illustrate something in his sermon by reference to the qualities of pitch, thought he should help his rustic congregation by enlarging a little on the qualities of that mineral. He accordingly commenced by saying, "Now, dear brethren, pitch is a bituminous substance:" rather a difficult beginning, we should think, to have brought to a successful conclusion.

Sometimes we have heard a very unnecessary catalogue of technicalities joined with several propositions in one sentence. It is hardly to be imagined how this increases the difficulty to a beginner; whilst it impresses the excellence of that simplicity and clearness which were so charming in Abernethy. We give an example of this defect. The lecturer is describing the continuation of the cuticle over the eyes of the crustacea, as lobsters, &c.: "The epidermis (the cuticle) in the compound eyes of the crus-"tacea passes transparent and homogeneous over the external "surface of the thick layer of the prismatic corneæ, which are "here, as in insects, generally hexagonal, but sometimes qua-"drangular; and to the internal ends of the prismatic corneæ are "applied the broad bases of the hard, tapering, transparent lenses, "which have their internal truncated apices directed to the retinal "expansions of the numerous optic nerves."

The high respect we entertain for the lecturer here alluded to, withholds us from attempting to supply a more homely version of the foregoing passage. But what an idea this must give to a student who reads it in "the outlines" of a science of which he is about to commence the study. There is nothing whatever difficult in the ideas themselves; but what a bristling *chevaux-de-frise* of hard words, what a phalanx of propositions! We fear we should never arrive at the knowledge of many of those beautiful adaptations which all animals exemplify, if we had to approach them by such a forbidding pathway.

As contrasted with simple facts thus obscured by an unnecessary complexity of expression, we may see in Abernethy how a very comprehensive proposition may be very simply expressed. Take almost the first sentence in his Surgical Lectures, the germ, as it were, of a new science: "Now I say that local disease, in-"jury, or irritation, may affect the whole system; and conversely, "that disturbance of the whole system may affect any part."

We have sometimes thought that lecturers who have had several desirable qualifications have materially diminished the attraction of them by faults which we hardly know how to designate by a better term than vulgarity, ill-breeding, or *gaucherie*. Now Abernethy had, in the first place, that most difficult thing to acquire, the appearance of *perfect ease, without* the slightest *presumption*. Some lecturers appear painfully "in company;"

others have a self-complacent assurance, that conveys an unfavourable impression to most well-bred people. Abernethy had a calm, quiet sort of ease, with that expression of thought which betokened respect for his task and his audience, with just enough of effort only, to show that his mind was in his business.

He had no offensive tricks. We have known lecturers who never began without making faces; others who intersperse the lecture with unseemly gesticulations. Some, on the most trivial occasion, as referring to a diagram, are constantly turning their backs *completely* to the audience. This is, we know, disagreeable to many people, and, unless a lecturer is very clear and articulate, occasionally renders his words not distinctly audible. Even in explaining diagrams, it is seldom necessary to turn quite round; the smallest inclination towards the audience satisfies the requisitions of good breeding, reminds them agreeably of a respect with which they never fail to be pleased, and of the lecturer's self-possession.

There are, indeed, occasions when the lecturer had better turn a little aside. Not long ago, we heard a very sensible lecturer, and a very estimable man, produce an effect which was rather ludicrous—a very inconvenient impression when not intended. He had been stating, very clearly, some important facts, and he then observed: "The great importance of these facts I will now "proceed to explain to you;" when he immediately began to apply the pocket-handkerchief he had in his hand most elaborately to his nose, still fronting the audience. It had the most ridiculous effect, and followed so closely on the preceding remark, as to suggest to the humorously inclined that it was part of the proposed explanation.

Some think it excusable to cast their eyes upwards, with an expression of intense thought, or even to carry their hands to their heads or forehead for the same purpose. But this conveys a painful feeling to the audience, whose attention is apt to be diverted from the subject by sympathy with the apparent embarrassment of the lecturer. Sometimes it conveys the impression of affectation, which of course is one form of vulgarity.

Abernethy was remarkably free from anything of the kind.

The expression of his countenance was, in the highest degree, clear, penetrative, and intellectual; and his long, but not neglected, powdered hair, which covered both ears, gave altogether a philosophic calmness to his whole expression that was peculiarly pleasing. Then came a sort of little smile, which mantled over the whole face, and lighted it up with something which we cannot define, but which seemed a compound of mirth, archness, and benevolence.

The adjustment of the quantity of matter to the time employed in discussing it, is an important point in teaching. A lecture too *full*, is as objectionable as a lecture *too long*. If the matter is spread too thinly, the lecture is bald and uninteresting, and apt to fall short of representing any integral division of a subject; if it be too thick, it is worse, for then all is confused and difficult. A man's brain is like a box packed in a hurry; when all is done, you neither know what you have got, nor what you have forgotten.

Here again Abernethy was in general very happy. Various circumstances would sometimes, indeed, in the Anatomical Course, oblige him to put more into one lecture than was usual; but he had always, in such a case, some little manœuvre to sustain the attention of his audience. No man was ever a more perfect master of the *ars est celare artem.* Everything he did had its object, every joke or anecdote its particular errand, which was in general most effectively fulfilled.

The various ways in which Abernethy managed to lighten up the general lecture, or to illustrate single points, can hardly be conveyed by selection of particular examples. There was a sort of running metaphor in his language, which, aided by a certain quaintness of manner, made common things go very amusingly. Muscles which pursued the same course to a certain point, were said to travel sociably together, and then to "part company." Blood-vessels and nerves had certain habits in their mode of distribution contrasted in this way; arteries were said to *creep* along the sides or between muscles. Nerves, on the contrary, were represented as penetrating their substance "*without ceremony*." Then he had always a ready sympathy with his audience. If a thing was difficult, he would, as we have said, anticipate the feelings of the student. This is always encouraging; because, when a student finds a point difficult, if he is merely diffident, he is depressed; if he is disposed to be lazy, he finds too good an excuse for it.

Abernethy's illustrations were usually drawn from some source already familiar; and if they were calculated to impress the fact, he was not very scrupulous whence he drew them. This would sometimes lead him into little trippings against refinement; but these were never wanton. Everything had its object, from the most pathetic tale down to the smallest joke. When the thing to be impressed was not so much single facts or propositions, as a more continued series, he had an admirable mode of pretending to con over the lecture in a manner which he would first recommend students to do—something after this fashion: " Let me " see—what did he say?" " Well, first he told us that he should " speak of Matter in general; then he said something about the " Laws of Matter, of Inertia, &c. Well, I did not understand " much of that; and I don't think he knew much about it him- " self;" and so on. There would now be a general smile; the attention of the class would be thoroughly alive; and then he would, in this " conning over," bring forward the points he most wished to impress of the whole lecture. A very striking proof of how much power he had in this way, came out in a conversation I had with Dr. Thomas Rees. This gentleman knew Abernethy well, and, in kindly answering some inquiries I made of him, he spoke of his power in lecturing. Amongst other things, he said: " The first lecture I ever heard him give, impressed me very " much; I thought it admirable. His skill appeared so extra- " ordinary! At the conclusion of the lecture," said Dr. Rees, " he proposed to the students to con over the lecture, which he " proceeded to do for them." Dr. Rees then continued repeating the heads of the lecture, and this after at least thirty, perhaps forty years.

Lecturers will sometimes endeavour to illustrate a point which is difficult or obscure by something more difficult still, or something borrowed from another branch of science. Sometimes the illustrations are so lengthy, or intrinsically important, that a pupil forgets *what principle* it was that was *to be illustrated.* When we are desirous of learning something about water or air, it is painful for a pupil to be "reminded" of the "properties of angles," which it is an even chance he never knew. It is equally uncomfortable to many an audience, in lectures on *other subjects,* to have the course of a cannon-ball, which three pieces of string would sufficiently explain, for mere purposes of illustration, charged with the "laws of projectiles," the "composition of forces," &c. We are of course not thinking of learn*ed* but learn*ing* audiences. To the former, lectures are of no use; but we allude to learners of mixed information and capacity; like young men who have been residing with medical men in the country; who come to a lecture for information, and who require to be interested, in order that they may be instructed. Abernethy's illustrations were always in simple language. Rough ridden sometimes by a succession of many-footed Greek compounds, the mind of a student loves to repose on the refreshing simplicity of household phrases.

Abernethy had stories innumerable. Every case almost was given with the interest of a tale; and every tale impressed some lesson, or taught some relation in the structure, functions, or diseases of the body. We will give one or two; but their effect lay in the admirable manner in which they were related.

If he was telling anything at all humorous, it would be lighted up by his half-shut, half-smiling, and habitually benevolent eye. Yet his eye would easily assume the fire of indignation when he spoke of cruelty or neglect, showing how really repulsive these things were to him. Then his quiet, almost stealthy, but highly dramatic imitation of the manner of some singular patient. His equally finished mode of expressing pain, in the subdued tone of his voice; and then when something soothing or comfortable had been successfully administered to a patient, his "Thank you, sir, "thank you, that is very comfortable," was just enough always to interest, and never to offend. Now and then he would sketch some patient who had been as hasty as he himself was sometimes reported to be. "Mr. Abernethy, I am come, sir, to consult "you about a complaint that has given me a great deal of "trouble." "Show me your tongue, sir. Ah, I see your digestive organs are very wrong." "I beg your pardon, sir; "there you are wrong yourself; I never was better in all my "life," &c. All this, which is nothing in telling, was delivered in a half-serious, half-Munden-like, humorous manner, and yet so subdued as never to border on vulgarity or farce.

His mode of relating cases which involved some important principle, showed how really interested he had been in them. A gentleman having recovered from a very serious illness, after having failed a long time in getting relief, was threatened, by the influence of the same causes, with a return of his malady. "He "thought," said Abernethy, "that if he did not drink deeply, he "might eat like a glutton." He lived in the country, and Mr. Abernethy one day went and dined with him. "Well," said Mr. Abernethy, "I saw he was at his old tricks again; so, being a "merchant, I asked him what he would think of a man who, "having been thriving in business, had amassed a comfortable "fortune, and then went and risked it all in some imprudent "speculation?" "Why," said the merchant, "I should think "him a great ass." "Nay, then, sir," said Abernethy, "thou "art the man."

On another occasion, a boy having suffered severely from disease of the hip, Abernethy had enjoined his father to remove him from a situation which he was unfitted to fill, and which, from the exertion it required, would expose him to a dangerous recurrence of his complaint. The father, however, put the boy back to his situation. One day, Abernethy met both father and son in Chancery Lane, and he saw the boy, who had a second time recovered, again limping in his walk. After making the necessary inquiry—"Sir," said he to the father, "did I not warn you not "to place your son in that situation again?" The father admitted the fact. "Then, sir," said Abernethy, "if that boy "dies, I shall be ready to say you are his murderer." Sure enough, the boy had another attack, and did die in a horrible condition.

This story, and others of a similar kind, were intended to impress the paramount importance of keeping diseased parts, *and* *joints especially,* in a state of *perfect repose;* and to prevent a recurrence of mischief, by avoiding modes of life inappropriate to constitutions which had exhibited a tendency to this serious class of diseases.

He was remarkably good on the mode of examining and detecting the nature of accidents; as fractures and dislocations. In regard to the latter, he had many very good stories, of which we will presently cite a ludicrous example. He could, however, throw in pathos with admirable skill when he desired it. The following lamentable case he used to tell to an audience singularly silent. He is speaking of the course of a large artery.

" Ah," said he, " there is no saying too much on the import-" ance of recollecting the course of large arteries: but I will tell " you a case. There was an officer in the navy, and as brave a " fellow as ever stepped, who in a sea-fight received a severe " wound in the shoulder, which opened his axillary artery. He " lost a large quantity of blood; but the wound was staunched " for the moment, and he was taken below. As he was an officer, " the surgeon, who saw he was wounded severely, was about to " attend him, before a seamen who had just been brought down. " But the officer, though evidently in great pain, said: 'Attend " 'to that man, sir, if you please; I can wait.' Well, his turn " came; the surgeon made up his mind that a large artery had " been wounded; but, as there was no bleeding, dressed the " wound, and went on with his business. The officer lay very " faint and exhausted for some time, and at length began to rally " again, when the bleeding returned. The surgeon was imme-" diately called, and, not knowing where to find the artery, or " what else to do, told the officer he must amputate his arm at " the shoulder joint. The officer at once calmly submitted to " this additional, but unnecessary suffering; and, as the operator " proceeded, asked if it would be long. The surgeon replied that " it would soon be over. The officer rejoined: 'Sir, I thank " 'God for it!' But he never spake more."

Amidst the death-like silence of the class, Abernethy calmly concluded: " I hope you will never forget the course of the " axillary artery."

His position was always easy and natural—sometimes homely, perhaps. In the Anatomical Lecture, he always stood, and either leant against the wall, with his hands folded before him, or resting one hand on the table, with the other perhaps in his pocket. In his Surgical Lecture, he usually sat, and very generally with one leg resting on the other.

He was particularly happy in a kind of coziness, or friendliness of manner, which seemed to identify him with his audience; as if we were all about to investigate something interesting *together*, and not as if we were going to be "Lectured at" at all. He spoke as if addressing each individual, and his discourse, like a happy portrait, always seemed to be looking you in the face. On very many accounts, the tone and pitch of the voice, in lecturing, are important. First: That it may not be inaudible; nor, on the contrary, too loud. The one of course renders the whole useless; the other is apt to give an impression of vulgarity. We recollect a gentleman who was about to deliver a lecture in a theatre to which he was unaccustomed. He was advised to ascertain the loudness required, and to place a friend in the most distant part, to judge of its fitness; but he declined it as unnecessary. When he had given the lecture, which was a very good one, on a very interesting subject, he was much mortified in finding that he had been inaudible to at least one half of the audience.

Abernethy was very successful in this respect. His voice seldom rose above what we may term the conversational, either in pitch or tone; it was, in general, pleasing in quality, and enlivened by a sort of archness of expression. His loudest tone was never oppressive to those nearest to him; his most subdued, audible everywhere. The *range* of pitch was very limited; the expression of the eye, and a *slight modulation* of the voice being the means by which he infused through the lecture an agreeable variety, or gave to particular sentiments the requisite expression. There was nothing like declamation; even quotations were seldom louder than would have been admissible in a drawing-room. We have heard lecturers whose habitually declamatory tone has been very disagreeable; and this seldom fails to be mischievous. A declamatory tone tends to divert the attention, or to weary it when properly directed. On almost every subject, it is sure to be the source of occasional bathos, which now and then borders on the ridiculous. Conceive a man, describing a curious animal in a diagram, saying, " This part, to which I now direct my rod, is " the point of the tail," in a sepulchral tone, and heavy cadence, as if he had said, " This is the end of all things." Another inconvenience often attending a declamatory tone, as distinguished from the narrative or descriptive, is the tendency it has to make a particular cadence. Sometimes we have heard lecturers give to every other sentence a peculiar fall; and this succession of rhythmical samenesses, if the lecturer be not otherwise extremely able, sends people napping.

Another fault we observe in some lecturers is, a reiteration of particular phrases. In description, it is not easy always to avoid this; but it seldom occurred in any disagreeable degree in Abernethy. We have heard some lecturers, in describing things, continually reiterating such phrases as " We find," " It is to be " observed," in such quick and frequent succession, that people's sides began to jog in spite of them.

Provincial or national idiom, or other peculiarity, is by no means uncommon, and generally more or less disagreeable. Abernethy was particularly free from either. He could, in telling stories, slightly imitate the tone and manner of the persons concerned; but it was always touched in the lightest possible manner, and with the subdued colouring and finish of a first-rate artist. His power of impressing facts, and of rendering them simple and interesting by abundance and variety of illustration, was very remarkable, and had the effect of imparting an interest to the driest subject. In the first place, he had an agreeable mode of sympathizing with the difficulty of the student. If he were about to describe a bone or anything which he knew to be difficult, he would adopt a tone more like that in which a man would teach it to himself than describe it to others. For example, he would say, perhaps: "Ah! this is a queer-looking bone; it has a very odd shape; but I plainly perceive that one may divide it into two parts." Then pointing with a probe to the division he proposed, he would begin, not so much to *describe* as to *find*, as if for the first time, the various parts of which he wished to teach the names and uses; the description being a kind of running accompaniment to his tracing of the bone, and in a tone as if half-talking to himself and half to the audience.

Every one feels the value of order, and clearness of arrangement. Of Abernethy's, we have already spoken generally: simplicity, and impressing the more essential facts, were his main objects. He showed very frequently his perception of the importance of order, and would often methodize for the students. He knew very well that A B C was much more easily remembered than Z K J; and he would sometimes humorously contrast the difference between a man whose knowledge was well packed, and one whose information was scattered and without arrangement. This he usually did by supposing two students under examination. The scene would not *tell* upon paper; but it never failed to create a good deal of mirth in the theatre, during which he would contrive to repeat the facts he meant to impress, without the tedium of mere reiteration.

Various people have been more or less deeply impressed with different parts of his lectures, most persons having their favourite passages. In his anatomical course we were never more pleased than by his *general* view of the structure of the body. He adopted on that occasion the synthetical plan, and in imagination put the various parts together which were to be afterwards taught analytically. In his surgical course, the manner in which he illustrated the practical points, and his own views in the "Eventful History of a Compound Fracture," was, we think, the most successful triumph, both as to matter and manner, which we have ever witnessed.

An abundance of resource and manœuvres of the kind we have mentioned, gave a great "liveliness" to his lecture, which *in its quiet form so as not to divert or disturb,* is a great difficulty in lecturing.

We have heard an excellent lecturer whose only fault, we think, was want of liveliness and variety. Few men could in other respects lecture comparably to him. Nothing could surpass the quiet, polished manner of this accomplished teacher.

His voice, though not good, was by no means unpleasing. His articulation elaborately distinct, and free from all provincialism. His language invariably correct and appropriate; the structure of his sentences strikingly grammatical; and they fell in such an easy, though somewhat too rhythmical succession, as to be at once graceful and melodious. His arrangement, always simple and clear. Nothing was more striking than the deferential manner in which he approached a philosophical subject. "I like ——," said one who had often heard him, "because he is always so "gentlemanly. There is nothing off-hand, as if he thought "himself very clever, but a kind of unaffected respect for himself "and his audience, which obliges one to pay attention to him, if "it were only because you feel that a man of education is "speaking to you."

What, it may be said, can such a man want? Why he wanted liveliness and flexibility. His voice measured forth its gentlemanly way with all the regularity of a surveying rod. Various and interesting as his subjects were, and handled with consummate ability, he must certainly have *taught;* yet we think he sent away many of his audience *passive* recipients, as distinguished from persons *set on thinking* what they had heard "into their own."

He performed his task like a good man and a scholar; but still it was like a task after all. It was something like a scholar reading a book, always excepting the beautifully clear illustrations for which his subject gave him abundant opportunity. He wanted that animation and interest in his subject by which a lecturer inoculates you with his own enthusiasm. He was the most striking example in our experience of the importance of liveliness and variety, and of making a lecture, however well delivered, just that thing which we *cannot* find in a book. The life-like, the dramatic effect was wanting; and it was to this alone that we can ascribe what we have not unfrequently observed in the midst of a generally attentive audience, a few who were "nodding" their assent to his propositions.

Now Abernethy's manner was perfect in these respects. He had just got the "cheerfully, not too fast" expression, that we sometimes see at the head of a musical composition. His manner was so good, that it is difficult to convey any idea of it. It was easy, without being negligent; cheerful, without being excited; humorous, often witty, without being vulgar; expeditious, without being in a bustle; and he usually took care that you should learn *the thing,* before he gave the *name of it;* and understand it, before he expatiated on the beauty or perfection of its adaptation to the ends it seemed designed to serve.

He was particularly chaste in the manner in which he spoke of design, or other of the Attributes so frequently observable in natural arrangements. It is a great mistake, we think, and not without something akin to vulgarity, to usher in any description of the beauties of nature by a flourish of such trumpets as human epithets form—mere notes of admiration. Nature speaks best for herself. The mind is kept in a state of excitement by too frequent *feux de joies* of this kind; the frequent recurrence of such terms as "curious! strange! wonderful!" on subjects where all is wonderful, have a sort of bathos in the ears of the judicious, while to the less critical they produce a kind of disturbed atmosphere, which is unfavourable to the calm operations of the intellect.

Abernethy was generally very careful in these matters. I give one example. He is speaking of cartilage, or gristle, which covers the ends of the bones where they form joints, and has explained its great elasticity, the use of it in preventing jarring; and contrasted the *springiness* of youth with the easily jarred frame of age. "Well," he adds, "this cartilage is fibrous, and "they say that the fibres are arranged vertically; so that the "body may be said to be supported on '*myriads of elastic* "'*columns.*'" That was the beauty by which he wished to impress that which he had previously *taught.*

When marvellousness is too much excited, many say, "Ah, "how clever that gentleman is! what an interesting lecture! "what a curious thing that was he showed us!" But when you inquire what *principle* or *law* was intended to be illustrated, you find that the sensual or the imaginative faculty has alone been excited, and has galloped off with that which was intended for the intellect.

If persons are examined as to a particular point of the lecture, they are apt to say: "Well, that is just what I wanted to know; "would you explain it?"

It would seem that it is a great mistake to excite marvellousness or our external senses very vividly, when we desire to concentrate the intellectual faculties. That breathless silence, with eyes and mouth open, that "*intenti que ora tenebant*" condition, excited by marvellousness, is very well for the story of Æneas, or Robinson Crusoe; but it is out of place, when we are endeavouring to augment our intellectual possessions.

We require, in fact, a calmer atmosphere. The desire to interest and hold the attention of our audience is so natural, that it is very apt to escape one that this may be done *on terms not consistent* with our real object—the interesting the intellect; and this fault is perhaps, of all, the worst; because it is never a greater failure than when it appears to be successful. All other faults in lecturing, if serious, in one respect tell their own tale in the thinning audience.

The learned author of the "Philosophy of Rhetoric" has observed that "A discourse directed to the understanding will "not admit of an address to the passions, which, as it never fails "to disturb the operation of the intellectual faculty, must be "regarded by every intelligent hearer as foreign indeed, if not "insidious." He had before said, "that in such a discourse you "may borrow metaphor or comparison to illustrate it, but not "the bolder figures, prosopopœia and the like, which are intended "not to elucidate the subject, but to *create admiration*."

"It is obvious," he continues, "that either of the foregoing, "far from being subservient to the main design (to address the "intellect), serves only to distract the attention from it*."

This judicious writer, however, in the first sentence makes a distinction, which requires, perhaps, to be received with some caution.

There is no discourse that is solely intellectual; the driest mathematical proposition interests our *feelings*. The pleasure of truth, what is that? Not merely intellectual, certainly. It is a pleasure derived *from* the intellect, no doubt; but it is a *feeling* entirely distinct. So, in addresses to the passions, if they are successful, the presiding influence of the intellect is very obvious; this away, a discourse soon merges into bombast or fustian, a something which neither impresses the feelings nor the passions as desired.

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* Vol. i, p. 23.

The true desideratum, as it appears to us, is accuracy of adjustment, not separation. In intellectual operations, the feelings are to be subservient to the accomplishment of the objects of the intellect. In discourses, where the passions or feelings are most appealed to, or most prominent, the intellect must still really guide, though it may appear to follow.

Notwithstanding that so much of Abernethy's lecturing was on anatomy, and therefore necessarily addressed to the eye, yet he seldom offered any *illustration* to the external senses. He was always endeavouring to impress the mechanical arrangement of parts, by reference to their uses and surgical relations. Even in speaking of light, he would be suggestive beyond the mere perception of sense. He used to say, of refraction of light, when the refracting medium was, as it commonly is, the denser body, "that the ray seems as if attracted"—a very suggestive phrase to any one who has thought much on the subject of light. It is a curious thing to observe how confused the ideas of many people are on phenomena of light; and we are afraid that the cause is, that the illustrations to the eye are given *too soon*. If people were made to *understand* by a simple illustration what they are about to *see*, it is probable they would have much clearer ideas. The intellect having gone before, the eye no longer diverts it from its office; and the eye would then be merely *impressing*, by means of a physical representation, an established idea.

CHAPTER XXIII.

"Suavis autem est et vehementer sæpe utilis jocus et facetiæ."—Cic. de Orat.

Abernethy's humour was very peculiar; and though there was of course something in the matter, there was a good deal more, as it appeared to us, in the manner. The secret of humour, we apprehend, lies in the juxtaposition, either expressed or implied, of incongruities, and it is not easy to conceive anything humourous which does not involve these conditions. We have sometimes thought there was just this difference in the humour of Abernethy, as contrasted with that of Sidney Smith. In Smith's, there was something that, told by whom it might be, was always ludicrous. Abernethy's generally lay in the telling.

> "The jest's propriety lies in the ear
> Of him who hears it, never in the tongue
> Of him that makes it,"

although true, was still to be taken in rather a different sense from that in which it is usually received. The former (a far higher species of humour) may be recorded; the dramatic necessities of the other occasion it to die with the author. The expression Abernethy threw into his humour (though of course without that broadness which is excusable in the drama, but which would have been out of place in a philosophical discourse) was a quiet, much-subdued colouring, between the good-nature of Dowton, and (a little closer perhaps to the latter) the more quiet and gentlemanly portions of Munden.

Few old pupils will forget the story of the Major who had dislocated his jaw.

This accident is a very simple one, and easily put right; but, having once happened, it is apt to recur on any unusual extension of the lower jaw. Abernethy used to represent this as a frequent occurrence with an hilarious Major; but as it generally happened at mess, the surgeon went round to him and immediately put it in again. One day, however, the Major was dining about fourteen miles from the regiment, and, in a hearty laugh, "out went his jaw." They sent for the medical man, whom, said Abernethy, we must call the apothecary. Well, at first, he thought that the jaw was dislocated; but he began to pull and to show that he knew nothing about the proper mode of putting it right again. On this, the Major appeared to be very excited, and vociferated inarticulately in a strange manner; when, all at once, the doctor, as if he had just hit on the nature of the case, suggested that the Major's complaint was in his brain, and that he could not be in his right mind. On hearing this, the Major became furious, which was regarded as confirmatory of the doctor's opinion; they accordingly seized him, confined him in a strait-waistcoat and put him to bed, and the doctor ordered that the barber should be sent for to shave the head, and a blister to be applied "to the part affected."

The Major, fairly beaten, ceased making resistance, but made the best signs his situation and his imperfect articulation allowed, for pen and paper. This request, being hailed as indicative of returning rationality, was complied with; and, as soon as he was sufficiently freed from his bonds, he wrote—"For God's sake send for the surgeon of the regiment." This was accordingly done, and the jaw readily reduced, as it had been often before. "I hope," added Abernethy, "you will never forget how to reduce a dislocated jaw."

We think that what we have said of the style of his humour cannot be very incorrect, from knowing that the impressions of one of his oldest pupils and greatest admirers were almost identical with the foregoing. I recollect it being said of John Bannister, that the reason his acting pleased everybody was that he was always a gentleman; an extremely difficult thing, we should imagine, in handling some of the freer parts of our comic dialogues. Abernethy's humour (exceptionally indeed, but occasionally a little broad) never suggested the idea of vulgarity; and, as we have said, every joke had its mission. Then, at times, though there was not much humour, yet a promptness of repartee gave it that character.

"Mr. Abernethy," said a patient, "I have something the "matter, sir, with this arm. There, oh! (making a particular "motion with the limb) that, sir, gives me great pain." "Well, "what a fool you must be to do it, then," said Abernethy.

One of the most interesting facts in relation to Abernethy's lecturing, was, that however great his natural capacity, he certainly owed very much to careful study and practice; and we cannot but think that it is highly encouraging to a more careful education for this mode of teaching, to know the difficulty that even such a man as Abernethy had for some few years in commanding his self-possession. To those who only knew him in his zenith or his decline, this will appear extraordinary; yet, to a careful observer, there were many occasions when it was easy to see that he did not appear so entirely at ease *without some effort*. He was very impatient of interruption; an accidental knock at the door of the theatre, which, by mistake of some stranger, would occasionally happen, would disconcert him considerably; and once, when he saw some pupil joking or inattentive, he stopped, and with a severity of manner I hardly ever saw before or afterwards, said: "If the lecture, sir, is not interesting to you, I must beg "you to walk out."

There were, as we shall hereafter observe, perhaps physical reasons for this irritability. He never hesitated, as we occasionally hear lecturers do, nor ever used any notes. When he came to any part that he perhaps wished to impress, he would pause and think for a second or two, with his class singularly silent. It was a fine moment. We recollect being once at his lecture with the late Professor Macartney, who had been a student of Abernethy's*. Macartney said, "what can it be that enables him to give so much "interest to what we have so often heard before?" We believe it to have been nothing but a steady observance of rules, combined with an admirable power *matured by study.*

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* Professor Macartney had also formerly given the Anatomical Demonstrations.

That which, above everything, we valued in the whole of Abernethy's lectures, was what can hardly be expressed otherwise than by the term, tone. With an absence of all affectation, with the infusion of all sorts of different qualities: with humour, hilarity, lively manner, sometimes rather broad illustrations, at other times, calm and philosophical, with all the character of deep thought and acute penetration; indignation at what was wrong or unfeeling, and pathos in relation to irremediable calamity; still the thing which surpassed all, was the feeling, with which he inoculated the pupils, of a high and conscientious calling. He had a way which excited enthusiasm without the pupil knowing why. We are often told by lecturers of the value of knowledge for various purposes—for increasing the power and wealth of the country—for multiplying the comforts and pleasures of society—for amassing fortunes, and for obtaining what the world usually means by the term distinction. But Abernethy created a feeling distinct from and superior to all mere utilitarian purposes. He made one feel the mission of a conscientious surgeon to be a high calling, and spurned, in manner as well as matter, the more trite and hackneyed modes of inculcating these things. You had no set essay, no long speeches. The *maral* was like a golden thread artfully interwoven in a tissue to which it gives a diffusive lustre; which, pervading it everywhere, is obtrusive nowhere.

For example, the condition attached to the performance of our lowest duties (operations), were, the well-ascertained inefficacy of our best powers directed to judicious treatment; the *crowning* test—the conviction that, placed in the same circumstances, *we would have the same operation performed on ourselves.* Much of the suggestive lies in these directions. Our sympathies toward the victims of mistake or ignorance, excited by the relation of their sufferings, were heightened by the additional mention of any good quality the patient might have possessed, or advantage of which he might have been deprived; and thus that interest secured which a bare narration of the case might have failed to awaken.

A father, who, in subservience to the worldly prospects of his son, placed him in a situation to which he was unequal, and thus forgot his first duty, the health of his offspring, was the "murderer" of his child. Another victim, we have seen, was as "brave a fellow as ever stepped," &c.

Humanity and Science went hand in hand. His method of *discovering* the nature of dislocations and fractures, by attention to the relative position of parts, was admirable; and few of his pupils, who have had much experience, have failed to prove the practical excellence of them. He repudiated nothing more than the too commonly regarded test, in fractures, of "grating, or crepitus." Nothing distinguished his examination of a case more than his gentleness, unless it was the clearness with which he delivered his opinion.

To show how important gentleness is—a surgeon had a puzzling case of injury to the elbow. He believed that he knew the nature of the accident, and that he had put the parts right; but still the joint remained in a half-straight position; and the surgeon, who knew his business, became alarmed, lest something had escaped him, and that the joint would be stiff. He proposed a consultation. The joint was examined with great gentleness, and after Abernethy's plan. The boy experienced no pain. Everything appeared in its natural position. The surgeon said: "Now, my boy, bend your arm a little, but no farther than just "to reach my finger; and not as much as that, if it gives you "any pain." This the boy did very gently. After waiting a few minutes, the surgeon again told him to bend it a little more, and upon the same conditions; and so on, until, in a very short space of time—perhaps eight or ten minutes—the arm had been completely bent. The boy had been alarmed, and the muscles had become so sensitive that they held the parts with the most painful tenacity; but, beyond this, there was nothing the matter.

We cannot help thinking that Abernethy's benevolence had a great influence in directing some of his happiest contributions to practice. We consider that every sufferer with that serious accident, fracture of the neck of the thigh bone within the joint, owes a great portion of any recovery he may have, to Abernethy. It was he who was the real means of overthrowing a dangerous dogma, that such cases could not unite by bone, and who opposed the practice consequent on it, by which reparation by bone became impossible. There was hardly any subject which he touched, of which he did not take some view more or less original; and his reasoning was always particularly simple and to the point. No man, we believe, ever exceeded him in the skill he possessed in conveying ideas from one mind into another; but he did a great deal more: those who really studied him were sent away thinking, and led to work with a kind of pleasure, which was in some sense distinct from any merely practical or professional interest.

He contrived to imbue you with the love of philosophical research in the abstract—with an interest in truth for its own sake; you found yourself remembering the bare facts, not so much from conscious *efforts* of memory, as from the suggestive interest of the observations with which they were so frequently associated. In going over one of his Lectures alone, they seem to grow and expand under your own reflections. We know not how to express the effect they produced: they seemed to give new pleasure on repetition, to purify your thoughts scarcely less than they animated your onward studies.

In studying their more suggestive passages, you would now and then feel surprise at the number and variety of important practical relations arising out of a single proposition. We are here merely stating our own early impressions of his power. What we always really felt was, that, great as was the excellence of these Lectures in a scientific or professional sense, there was something more excellent still in the element they contained of intellectual expansion and of moral improvement.

We cannot indeed say that they had no faults; but we should be hard driven to point them out: and although we feel how short our attempt to give some idea of his mode of proceeding must fall of doing him justice, still, if there be any truth at all in our representation, it is quite clear that his negative excellences alone must have implied no ordinary powers. But we must conclude: "Quid multa? istum audiens equidem sic judicare soleo; quidquid aut addideris aut mutaveris aut detraxeris, vitiosius et deterius futurum."

CHAPTER XXIV.

HOR. Is it a custom?
HAMLET. Ay, marry, is't:
But, to my mind, though I am native here
And to the manner born, it is a custom
More honoured in the breach than the observance.

HAMLET, Act I, Sc. IV.

IF a moralist were to divide his catalogue of immoralities into such as were of general commission, and such as occurred in the conduct of the various trades and professions, we fear the latter division would suggest no flattering position to humanity. An elevation somewhat above gifted creatures it might be; but still we fear it would be at so low a level as to afford Man but a humiliating indication of the height from which he had fallen. He would, in too many instances, perhaps, find his real *claims* to his high destiny about equal to the shadowy difference between a creature who fulfils *some* only of his responsibilities, and one who has no responsibilities to fulfil. We should like to hear some grave philosopher discourse on Fashion: it is surely a curious thing, for there is a fashion in everything. It is very like habit; but it is not habit neither. Habit is a garment, which takes some time to fit easily, and is then not abandoned without difficulty. Fashion is a good fit *instanter*, but is thrown aside at once without the smallest trouble. The most grotesque or absurd custom which slowly-paced habit bores us with examining, is at once adopted by fashion with a characteristic assentation.

Morals are by no means free from this kind of conventionalism: so much the contrary, that few things evince more strongly the power of fashion. It might be imagined that the multiplication of examples would tend to teach the true nature of the thing exemplified; but it would not seem so with error; "*tout au contraire.*" Arts or acts, which are tabooed as vicious in the singular number, become, in the plasticity of our moral grammars, very tolerable in the plural. Things that the most hardy shrink from perpetrating *single-handed*, are regarded as easy "compliances with custom" when "joint-stock" vices; practices which, when partial, men are penetrating enough to discover to be unchristian, or sufficiently sensitive to regard as ungentlemanly, pass muster with marvellous lubricity when they become universal. We can anathemize, with self-complacent indignation, vices in which we have no share; but we are abundantly charitable when we discuss those in which we have a common property; and, finally, moral accounts are settled very much to our own satisfaction, as Butler says, by compounding

"For sins we are inclined to,
By damning those we have no mind to."

After all, society keeps a pretty good "look-out" after offences distributed in common. The law is tolerably comprehensive of things which are of general commission; and mankind, sooner or later, contrive to catch, or successfully oppose, the numerous little enormities which slip through the finest of our legal meshes.

"Raro antecedentem scelestum,
Deseruit pede pœna claudo."

From all this it results that moral obliquities, which fall within the observation of society, make but an up-hill game; that which is *felt* to be prejudicial to the interests of all men, is easily determined to be vicious. But here again there is much in fashion. Society has often determined that the immorality of a thing is not to be measured by the nature of the act, nor the motive even on which it has been founded, so much as by the more refined test afforded by the *position* of the *actor*. One man may, like a sort of commercial megatherium, gorge, with railway velocity, provisions which a once-breathing, fond affection and a cold world had alike determined to be the life-blood of widows and orphans, and yet have noblemen and others for his associate! he may perhaps be a legislator in a great nation; whilst the poor starveling, who steals for the vulgar purpose of satisfying hunger, may be sent to the treadmill, where he may solve at leisure the problem thus set him, by "the most enlightened nation on earth."

Again, vices which have a known influence in disturbing the relations of society are in various ways opposed by the more *public* influence of religion. So that in the end a man finds—although he may arrive at the conclusion, only by exhausting all other views before he hits on those which lead to it—that honesty is as good a way of getting on as any other; or he may advance perhaps even on this utilitarian creed so far as to agree with Tillotson: that people take more trouble to get to Hell, than would suffice to carry them to Heaven. The immoralities of trades and professions lie in a very different position, and involve peculiarities which favour their growth and perpetuity.

They are committed in secret;—people are proverbially cautious of attacking the weak positions of others, who feel that their own are ill-defended. This, and the established manœuvres of each calling, enable an individual to do a good deal "off his own bat," without, as one of our bishops happily expressed it, "being caught out." In trade we are sometimes informed that a thing cannot be sold cheaper; that the price asked is already less than the cost; and people are appropriately addressed as idiots, who every day appear to believe that which common sense shows to be impossible.

Your purveyors will sometimes tell you that they are not living by the prices they charge; although you have just ascertained that the same article may be bought at infinitely less cost in the next market. The other day, a watchmaker told us that our watch wanted a good deal of looking to, and, amongst other things, "no doubt cleaning;" but this he discovered, we suppose, by some recondite mesmeric process in a book, which recorded when it had been cleaned last, without looking at the watch at all.

As regards professions, lawyers are said to defend right and wrong with indiscriminate avidity, with the encouraging prospect of obtaining more fruit in maintaining one wrong cause, than establishing twenty right.

Then the *real nature* of these things is, like too many in other sciences, obscured by a cloudy nomenclature. We hear of "customs of the trade," "secrets of the trade," or "profession," applied to things which the moralist only recognizes under very different designations. Sophisms thus secured, and which appear to minister to a man's interests, have their true colours developed with difficulty; to say nothing of it not being easy to discover that which there is no desire to examine.

If any man should be so "peculiar," or "crotchety," as to consider that names are of little import, and that "Vice is vice, for a' that," and venture to anathematize any custom, or even refuse to be an accessory, in declining to wink at it, he may encounter charges of violating professional confidence, of being deficient in a proper *esprit de corps,* and be outvoted, for no better reason than that he cannot concur in the dogma, that a *vicious sophism is more valuable than a simple truth;* nor agree with the currier, "that leather is the best material for fortification." He may possibly be let off by conceding his connivance; which is little better than declining to be thief, as too shocking; but having no objection to the more lubricated position of the receiver.

But does any one for one moment believe that all this can be hung on any trade, or profession, with no effect? Or that it will not have a baneful influence on every calling, and that in proportion as its *real* and *proper* duties are beneficent and exalted? Now, whilst we claim for the medical profession a character which, in its single-mindedness and benevolence, yields to no other whatever, we fear it is not entirely free from these technical besettings.

In the medical profession, we trust, that which we, for want of a better term, designate as technical immoralities are exceptions.

Exceptional they may be, and we sincerely hope they are; but, in a crowded island, exceptions, even if *relatively* few, may be *absolutely* numerous; and whenever they occur, especially if men hold any position, one case of compromise of duty does more harm than a hundred of the most inflexible adhesions to it can remedy. Suppose a patient apply to a surgeon with a complaint requiring one operation, and his fears incline him to another; he is informed it is improper for his case: that so far from relieving him, it will indefinitely increase his sufferings. The patient reiterates his wishes; the surgeon declines doing that which he would not have done in his own person. On lamenting what he believes to be the consequences of the patient's determination, to a brother surgeon, he is met by: "What a fool you must be to throw away —— guineas; if you don't do it, somebody else will."

He is too right in his prediction, and so is the surgeon who refused to operate, and he has lost a large fee; he receives the verification of his prediction subsequently from the patient, who exclaims, "Sir, I never have a moment's ease!" and when, after weeks of suffering, the patient dies, the surgeon consoles himself with the melancholy satisfaction of not having contributed to sufferings which he was called in too late to remedy.

The more plastic practitioner has, it is true, taken fifty or a hundred guineas, it may be, out of the one pocket, and put it into his own; but in what way are mankind benefited? or does any one really think that the apparent gainer can ultimately be so? The fault in this, as in many other cases, is the ignorance of the public. There is nothing in the foregoing sketch that was not as easily intelligible to the commonest understanding, as that two and two are equal to four! And is it no evil that one man should pay so large a sum for so plain a piece of honesty? or that another should be rewarded, as the case may be, for ignorance, or a compromise of his duty?

Let us take another case. A gentleman was called on to give a certificate; he examined the case, and found that the wording of the certificate called on him to certify to that which was diametrically opposite to the fact. He naturally declined, and, as the point was of some importance, went to the parties to explain. He was then informed that two professional men had, the previous day, given the certificate without hesitation. He is complimented on his conscientiousness, but never employed again by that family; and he has the further satisfaction of hearing that his place is supplied by one of his more accommodating brethren! We fear that in such a case there is a balance to be adjusted between the several persons, and an appropriate appellation to be discovered besides. We respectfully leave it to the reader's judgment to adjust the one, and to draw on his aptitude for nomenclature to supply the other.

Again, a man is called in to a consultation; he disapproves of the treatment, but declares to the friends of the patient that every thing has been very properly done. In another case of consultation, finding that every thing has been really conducted properly, he commences an *apparently* different treatment, but essentially the same, without giving his confiding brother the benefit which his acquiescence in his views would necessarily imply.

In an operation, where the course is doubtful and the opinion various, the choice is left to the patient—that is, the decision of how the surgeon is to act is to be determined by him who is confessedly really least capable of judging. Can it be right to perform a *doubtful* operation under such circumstances? Should not the patient reflect that the *temptations* are all on one side? The attempt to dispense with the operation is laborious, time-consuming, anxious, encouraged perhaps only by small, minute accessions of improvement, interspersed with complaints of tedium and delay, and the result admitted to be doubtful; the operation, on the other hand, is a work of a few minutes, the remuneration munificent, the *éclat* productive, and the labour nothing. All this and much more no man can entirely prevent; the real cause is the ignorance of the public, which a very little of the labour they bestow on many far less important subjects would easily and quickly dispel.

If these and multitudes of similar things are evils; if they contribute to debase a profession and to charge the conscientious with unthankful office and unrequited labour, and to confer fame and profit on a triumphant chicanery; we surely must feel indebted—not only as professional men, not merely as patients, but in a far higher and wider sense—to a man who, availing himself of a commanding position for the highest purposes, endeavoured, by precept and example, to oppose all such proceedings, and to cultivate a high *morale* in the conduct of the profession. Now no one more sedulously aimed at this than John Abernethy. Although we shall not, we trust, be accused of underrating the obligations we owe him in a professional or scientific sense, we think that, great as they are, they are at least equalled by those arising out of that duty-to-your-neighbour spirit which was so universally diffused through every thing he taught, and which, in his intercourse with his pupils, he never on any occasion failed to inculcate. We will endeavour to render what we mean intelligible, and perhaps we cannot do this better than by selecting a few illustrations from observation of "Abernethy in Consultation."

CHAPTER XXV.

"Hoc autem de quo nunc agimus id ipsum est quod utile appellatur." —CICERO.

CONSULTATION. We are to have a consultation! What a sound is that! How many a heart has been set thumping by this one word. We doubt whether there be any in the English language that has more frequently disturbed the current it was intended to calm. But consultations must be. Already the carriage of a physician has arrived, a tremendous rap has been given at the door, the interesting visitor is already in the library.

Another rap, louder somewhat than the former, announces another physician, or a consulting surgeon. The general practitioner, taking advantage of his intimacy with the family, may have perhaps very sensibly walked in without knocking at all. They are now all assembled in the library, and, having remarked on a "Storm Scene" by Gaspar Poussin, which hangs over the fire-place, we leave them to the preliminaries of a consultation.

Presently they are introduced to the patient, on whom the knocking has already had some effect. A short pause, and they are again assembled in the library. In a few minutes the bell rings, and the father of a fine young woman is summoned to hear their decision. As he proceeds, he stealthily removes a straggling tear that, with all care, would get out of bounds, enters the library, and hears the result of the consultation. Neatly enveloped *honoraria* are presented to the consultants, the bell has rung, Thomas has shown the gentlemen to their respective vehicles, and and so ends the consultation.

The father, a widower, returns to the drawing-room, and his second daughter says: "Well, papa, what do the doctors say of Emily?" "Well, my dear, they say that Emily is very ill; that she requires great care; that they cannot say positively, but hope she may ultimately do well. They entirely coincide with our friend Mr. Smith Jones as to the nature of the disease, and think his treatment of the case has been highly judicious. They say there are some points on which the case may turn, but of which they cannot speak positively to-day; but they hope to be able to do so when they meet again, which they are to do the day 'after to-morrow.' They all seem to consider the nervous system very much affected. They say we must keep Emily very quiet. She is to have any light diet she desires, and to have some new medicine to-morrow. The cod-liver oil, they say, has done her all the good now that it is calculated to do, and she is this evening to take a composing draught." The family are silent, and so ends the consultation.

What! and are all consultations like that? No, reader, we hope not. Many a valuable life has, we believe, been saved or prolonged by consultation; and perhaps many more would be, if people would only *think a little more before* they act in such important matters.

But how is this to be, when men and women who *do* think will dive into all other branches of knowledge, more or less, and neglect all inquiry into laws, a *general* knowledge of which may easily be acquired, and of which ignorance is so frequently visited by no less punishment than the premature separation of our dearest ties, and the loss or impairment of that which is acknowledged to be the first of temporal blessings. There are many things in consultations, which require putting right, which do not depend on any one man, or on any one class. What are we to say to a man who admits the ability, and approves of the investigative power and practice of another, but who cannot call him in because he *orders so little medicine?* Or of the mode in which the public treat another, who, wishing to practise as a gentleman, and to be paid for his brains rather than his bottles, makes no charge for the latter; and yet who informed us that, having tried this for three years, he lost so many families by it, that if he had not relinquished the plan, he should have wanted bread for his own? Or who shall we blame, when one man, calling in another to a patient, finds that the other feels no scruple in repaying the *prestige* which he thus owes to his confiding brother by taking the patient from him the first opportunity; albeit that he occupies what should be, and, we trust, as the rule is, a higher walk in the profession.

We have seen so much feeling arising from this practice, and we hold it as so serious an error, that we regard it as *tending more than any one thing whatever* to injure the position and character of the consulting branches of the profession.

Again, how inconsiderate must be the adoption of that custom which first of all institutes an inquiry to ascertain whether there is any difference of opinion, and yet accompanies it with trammels, the tendency of which is to oblige men to *appear* to agree. When coincidence of opinion is *alone safe*, who can be expected to differ? The public have allowed lawyers to differ without that difference involving any reproach. They have also proverbially determined that "doctors do." Yet that which they consider as an almost necessary rule in the one case, in the other they are very prone to visit, in regard to some one of the dissentients, as a proof of professional inferiority. A great deal of mischief results from this state of things; it indefinitely increases the difficulty of obtaining a *really honest* and unreserved opinion, and leads to other consequences which tend to impair that mutual confidence between man and man, which should be the very life-blood of a fine profession.

We recollect a case, on the nature of which two surgeons were consulted; and when the patient—a young lady—had been withdrawn, the *father* requested to know if there were any objection to his being present at the conference. The surgeon to whom he seemed to address himself said, "None on my part;" to which the other *seemed* also to assent. When the consultation was over, the surgeon who had thus *seemed* to consent addressed the other, saying: "If ever we meet again, sir, our consultation must not be in the presence of the friends of the patient." This was said in a tone to which the other had not been accustomed; but, as a lady had just then entered the room, no reply was made. The next morning, however, the gentleman was called on to re-consider the tone in which he had thus addressed his brother consultant, when a satisfactory explanation settled the matter.

Such things, however, are extremely disagreeable, and illustrate how much more easy it is to go straightforward than by any zigzag route. What! could not a father hear the honest opinion of two men concerning his child, until results of the consultation had been shorn down, certain parts thrown out, and the rest dovetailed together so as to be made a symmetrical nondescript, adapted to the requisitions of a vulgar conventionalism?

In another case, in a consultation on a disease as plainly scrofulous as it was possible to be, the family attendant had pronounced that it was *constitutional,* but *not* scrofula. This was, it appeared, a miserable assentation to the prejudices of the family, for the result proved that he knew better. Nevertheless, a consultation had taken place already with a very eminent surgeon, without the family being any the wiser in regard to the nature of the disease. The case not progressing, another surgeon was consulted, who, being asked what he considered the disease to be, replied that it was scrofula. Upon this, considerable surprise and uneasiness were manifested on the part of the family; and the surgeon, wondering what, in so plain a case, could be the doubt, took occasion to see the former medical attendant, and to ask him what he thought of the case; when he said that it was clearly scrofula, and that he had *never known the children* of certain temperaments to which he considered the parents to belong, wholly without a tendency to that disease; so that he had all along been blinding the parents, so far as his opinion and that of another eminent man went, to the real nature of the malady.

An occurrence, singular, as we hope, took place one day in consultation, showing how comfortably the most questionable things may appear to sit on a man's conscience, if only supported by some *supposed* sanction from custom. Two surgeons met to consider a case. They differed as to its nature and treatment; as thus—the one thought a certain remedy necessary, and that any prospective consequences on its employment merged into the necessity of the moment; the other thought that remedy wholly unnecessary, and therefore held even the *possibility* of any prospective mischief, an insuperable objection to its use; conceding, however, that it *might* possibly, if the treatment were conducted cautiously, be so managed as to secure the patient from the consequences in question; and that, if the patient preferred that course, after the matter had been fairly stated to him, he would superintend the plan.

Having retired into another room to consult, they were now again introduced to the patient, when the junior was somewhat startled to hear his senior begin thus: "Well, sir, we have considered your case, and we perfectly agree as to the nature of it." Thinking that this unexpected exordium might possibly be preliminary to some explanation of the points on which they differed, the surgeon waited a minute to hear what followed; but finding that his brother was irremediably misrepresenting the matter, he said: "Stop, let us understand each other!" and then stated what had really happened, and the exact nature of their respective opinions; on which the other, in the coolest manner possible, said: "Yes—exactly, you are quite right!" and so ended the consultation.

There is, no doubt, some fault on all sides. The public are too uninformed on these important subjects, and therefore do much that is equally against their own interests and the preservation of that dignity and respect which should ever attach to a high-missioned profession. But is the profession itself free from blame? Do they never themselves minister to this wretched system of double dealing? We fear there is but one answer to this question. We are not careful, for obvious reasons, to multiply examples of such things; but we are convinced that there must be a change; and since the profession cannot, as too many of the public may, plead ignorance—for this and a thousand other reasons, they should lead the way. We only claim for ourselves what we readily concede to others—the expression of our opinion —when we say that consultations should be *bonâ fide* examinations of the case, and should be followed by *bona fide intelligible* explanations of it to the *patient* or his *friends*, according to the obvious suggestions of prudence or humanity in the individual case. When the treatment is correct, the most honest proof should be afforded of it; namely, the continuance of the plan of the attendant in ordinary, unobscured by the farce or form of a prescription; or, if *additional* appliance only is adopted, in such a case its subordinate character should be honestly explained.

Where there is difference of view, if it be material, that also should be candidly stated; and if this be done with *real fairness*, our experience has convinced us that it may be effected without damage to either party. In other differences of opinion, the public never think it necessary to impute ignorance or incapacity: let them, *for their own sakes*, repudiate this construction in regard to the medical profession. Lastly, let them for ever abandon the practice of paying any man for his bottles, the number of which will often be an inverse ratio with his skill and judgment.

To return to Abernethy. No doubt his manner varied in consultation; but of "Manner" we shall speak in a separate chapter. We will here record our impressions as to "Abernethy in consultation;" the conditions which seemed to secure a considerate opinion from him; the good sense and reasonableness of those conditions; the practical result of the observance of them, and the effect they were calculated to produce on the public, in giving to consultations that efficiency by which they should be characterized—an efficiency which *every one* begins to perceive to be necessary, and which must be equally to the advantage of the public and the elevation of the profession.

CHAPTER XXVI.

"Quidquid enim justum sit id etiam utile esse censent; itemque quod honestum idem justum, ex quo efficitur, ut quidquid honestum sit idem sit utile." CICERO.

THE first thing, in consulting Abernethy, if you were a medical man, was to be clear, and "well up" in the nature of the case; and the next thing, not to state any opinion, unless you were prepared to give a good reason for it. These conditions premised, we never saw any one more unaffectedly deferential to the opinion of another.

A surgeon took a serious case to him, in which the question was as to the removal of a large tumour in the neck, which seemed to be acquiring connections of such depth and importance as to threaten (should that step be desirable) to render the removal of it impossible. The patient was advised to allow his surgeon in ordinary to state his case, and to interrupt him only if he omitted anything in regard to it within the patient's knowledge. This was done; the general habits of the patient described, with the difference which had existed antecedent to the age of thirty, and subsequently thereto. Mr. Abernethy examined the tumour.

To the SURGEON. It is parotid, is it not?

SURGEON. I think not, sir.

ABERNETHY *(hastily)*. Why not?

SURGEON. Because, sir, reflecting on the depth and situation of the parotid gland, I should hardly expect the tumour to be so moveable.

ABERNETHY. Ah, I see! Very well. (Then to the patient). Well, sir, I should advise you to attend to your general health, and continue to follow Mr. ——'s advice on that subject. What I say is— (Then followed a short lecture on the digestive organs.)

Patient. Do you think, sir, I shall get rid of it?

Abernethy. Nay, I cannot tell that. But now suppose you pursue a plan steadily, say for a month, and the tumour does not increase, will it not be encouraging to you?

Patient. Certainly, sir.

Abernethy. Well, then, try it; for if its removal should become necessary, you will at least be in better condition for the operation. If it does not get larger, or otherwise inconvenience you, let it alone.

The patient had heard so much of Abernethy's roughness, that he came away equally pleased and astonished.

A surgeon took a Colonel in the army to him, with a case which was progressing fairly, but, as he conceived, in consequence of the patient not paying so much attention to his health as he was recommended to do, not so satisfactorily as he desired. The Colonel briefly stated his case.

Abernethy. Show me your tongue. Ah! that is bad enough.

Colonel. You are quite right there.

Abernethy. Well, man, I don't require to be told that.

Here the surgeon stated the treatment, which had, in addition to attention to the general health, involved some local administrations, of which, in general, Abernethy approved, but, as it would seem, not in this case. His difference of opinion he thus stated, in the presence of the patient:

"Well, I say that there is a sufficient disorder of your digestive organs to maintain the annoyances of which you complain; "and I should confine my attention to endeavour to put that "disorder right. Mr. —— seems to think that, in adding to "this treatment the plan he proposes, he will shorten the case. "Well, that may be so; he has paid, I know, a good deal of "attention to this subject; and if I had one of my own family "ill with this complaint, I should feel perfectly satisfied, if they "were under his care. At the same time, I say what I think;

" and if you do not find the general plan successful, then the " means he proposes might with propriety be added."

No harm resulted from this difference of opinion; but much benefit. The patient was not pleased with Abernethy; but he thought him very skilful and very honest.

One day, a surgeon went to him under the following circumstances. A patient who had recently recovered from a lameness, which, as alleged, had its cause in the foot, on a relapse went to another surgeon. This gentleman had, as it ultimately appeared, hastily decided that the lady had a complaint in the hip; she was therefore consigned to bed, and treated for disease of that part. After about three months, feeling no better, she desired to see the surgeon under whose care she had formerly been.

The surgeon was now very much annoyed; for he found that he had been by many persons charged with having mistaken the case, which he had never even seen on the second attack, and which now presented a phase in which disease of the hip, to a hasty examiner, might easily be suggested. He was not much better satisfied, when, after a careful examination of the case, he felt convinced that there was no disease in the hip, although the symptoms were more severe than ever. He declined undertaking the case without a previous consultation with the surgeon who had decided it to be a disease of the hip; but the patient being immoveable in her opposition to this request, and offering any other surgeon, or more, if required, her wishes were acceded to, and Mr. Abernethy requested to visit the case. On going to the patient, the surgeon explained to Mr. Abernethy the points at issue, but without telling him to which view his own opinion inclined, or the positive *dictum* of his senior brother, a very eminent surgeon. " I shall, therefore," said he to Abernethy, " feel " particularly obliged to you, sir, if you will examine the case for " yourself."

When they were introduced to the lady, Abernethy said: " Well, now, I should be very well satisfied with Mr. ——'s " report of your case; but he says I must examine the limb for " myself: so here goes."—A somewhat repulsive beginning to a delicate lady, perhaps; but nothing could be more cautiously gentle than his examination. In conducting it, he had avoided one test which usually *does* give a little pain. The other surgeon, deeming the decision to be very important, reminded him of this test (raising the limb and striking the heel gently), which he then proceeded to do with equal gentleness. "That will do," said he. "Now, sir, shall we go into another room?" "No, sir," replied the surgeon. "If you please, Mr. Abernethy, I should "prefer your at once telling the patient what is your opinion on "the case."

He then declared his opinion; but, fearing he might injure one or other party, with the following exordium: "Now, madam, "we are all liable to mistakes: there is no man living who does "not make more or less; and I am sure I make mistakes; there"fore I may do so in my opinion of your case. But for the life "of me I cannot perceive that you have any disease in your hip." He then gave a short, but most lucid view of what he conceived to be the cause of her pain, and illustrated it by referring to something which happened to himself in one of his own severe rheumatic attacks. The result proved that he was quite right as to his view of the case; the lady, by exercise and other means (which, had the hip been diseased, would have only exasperated her complaint), had a good recovery.

One very great charm in Abernethy in consultation was, that there was no difficulty in getting him to speak out. Some men are so afraid of being wrong, that they never give you the whole of their opinion in a case involving any difficulty. It is so obscure, and followed up by so guarded a prognosis, that it sometimes amounts to no opinion at all.

Even with surgeons who were very unobjectionable, Abernethy in his best manner contrasted very favourably. We recollect being very much struck with this when, very young, we had to meet Mr. Cline and Mr. Abernethy, within a few days of each other, in the same case. Mr. Cline was very kind to the patient, elaborately civil; nor was there anything which could be fairly regarded as objectionable; but his manner was too artificial; the contrast in Abernethy was very agreeable. The case was serious, and (as we thought) hopeless. Abernethy, the moment he saw it, had his sympathies painfully awakened. Having asked a few questions, he, in the very kindest manner, said, "Well, I will "tell you what I would do, were I in your situation." He then proceeded to direct how she should regulate her living, how avoid mischievous experiments, and went into a rather lengthy series of directions, in the most unaffected manner, without leaving the room, or having any private consultation whatever. The lady, who was a distinguished person, and a very accomplished woman, was exceedingly pleased with him.

His manner, as we shall by and by admit, was occasionally rough, and sometimes rather prematurely truthful. One day, he was called, in consultation, by a physician, to give an opinion on a case of a pulsating tumour, which was pretty clearly an aneurism. On proceeding to examine the tumour, he found a plaister on it. "What is this?" said Abernethy. "Oh! that is a "plaister?" "Pooh!" said Abernethy, taking it off and throwing it aside. "That was all very well," said the physician; "but that 'pooh' took several guineas out of my pocket."

On the other hand, he never failed to give the warmest and most efficient sanction he could to what he conceived to be judicious treatment on the part of a practitioner with whom he was in consultation. Mr. Stowe has kindly sent me a very good example of this; and it illustrates also another very valuable feature in a consultant: the forbearance from *doing anything* where nothing is necessary. A gentleman had met with a severe accident, a compound dislocation of the ankle, an accident that Abernethy was the chief means of redeeming from habitual amputation. The accident happened near Winterslow Hut, on the road between Andover and Salisbury, and Mr. Davis of Andover was called in. Mr. Davis placed the parts right, and then said to the patient, "Now, when you get well, and have, as you most likely will, a stiff joint, your friends will tell you —'Ah! you "'had a country doctor.' So, sir, I would advise you to send "for a London surgeon to confirm or correct what I have done." The patient consented, and sent to London for Abernethy, who reached the spot by the mail about two in the morning. He looked carefully at the limb, and saw that it was in a good position, and was told what had been done. He then said, " I am " come a long way, sir, to do nothing. I might indeed pretend " to do something; but as any avoidable motion of the limb " must necessarily be mischievous, I should only do harm. You " are in very good hands, and I dare say will do very well. You " may indeed come home with a stiff joint; but that is better " than a wooden leg." He took a cheque for his fee (sixty guineas), and made his way back to London.

Soon after this, an old clergyman, in the same neighbourhood, had a violent attack of erysipelas in the head and arm. His family, becoming alarmed, wrote up to his brother, who resided near Bedford Row, to request Mr. Abernethy to go down and visit the patient. Abernethy said, " Who attends your brother?" " Mr. Davis*, of Andover." " Well, I told him all I knew " about surgery, and I *know* he has not forgotten it. You may " be perfectly satisfied. I shall not go." Here, as Mr. Stowe observes, he might have had another sixty guineas.

He always felt a great deal of interest about compound dislocations of the ankle-joint; because of his conviction that amputation, then so commonly resorted to, was unnecessary. He used to tell several cases in his lectures. One of them we will briefly relate here. It was that of a labouring man, who fell off a scaffold in his own neighbourhood; and, amongst other surgeons, they had sent for Abernethy. When he got to the house, he found, he says, " a poor wee man, lying on his mattress, with a " very complete compound dislocation of the ankle-joint. The " joint was completely exposed, and the torn skin was overlapping " the edge of the bone." He placed the parts in their natural position, and drew the skin out of the rent; and when he had thus adjusted it, as he said, a horrible accident looked as if there had been very little the matter. " Do you think, sir," said the poor little man, " that this can ever get well?" " Yes, verily," said Abernethy. " Do not be out of heart about it; I have known

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* A very early pupil of Abernethy's. Mr. Davis was many years in the army, and afterwards practised with great credit and success at Andover. Late in life, he retired to Hampstead, where he died at an advanced age, about four years since.

" many such cases do well." " Why, sir," said the man, " they " have gone for the instruments." " I now found," said Abernethy, " that two other surgeons had seen him, and had deter- " mined that it was necessary to amputate. I felt that I had got " into an embarrassing predicament, and was obliged to wait until " these heroes returned. When they arrived, and saw the man " lying so comfortably, they seemed a little staggered: but one " of them said, ' Mr. Abernethy, you know the serious nature of " ' these accidents, and can you give us an assurance that this " ' will do well?' I said, ' no, certainly not; but if it does not " ' do well, you can have recourse to amputation afterwards, and " ' my surgical character is pledged no further than this. I give " ' you the assurance that no immediate mischief will come on to " ' endanger the man's life. You may wait and see whether his " ' constitution will allow him to do well.' I added: ' I feel that " ' I am got rather into a scrape; so you must allow me to ma- " ' nage it in my own way.' So I got splints, put up the limb, " varnished the plaister, and then told them about sponging it " continually, so as never to allow any increase of temperature. " Now there are two holds you have on a patient's mind—hope " and fear; and I make use of both. So I said, ' If you lie " ' perfectly still, you will do well; and if you move one jot, you " ' will do ill—that's all.' " The remainder of the case need not be given. The man recovered, and saved his limb.

We have referred to that case because, though relating to a professional matter, there is a moral in it. He might easily have saved himself all the trouble he took, and on the plea of etiquette; but the poverty of the man pleaded for his limb, and the impossibility in such a case, of the imputation of any wrong motive, left free exercise for the prevailing feature of Abernethy's character—benevolence. The mention of the instruments secured to the poor man that *personal* attention to details by Abernethy himself which a more wealthy patient might not have so certainly obtained.

We have remarked before on his kindness to hospital patients; and sometimes the expression of their gratitude would be very touching. It is difficult or impossible to carry out Mr. Abernethy's principles of practice with *perfect* efficiency in the atmosphere of a large hospital in a crowded city, yet the truth of his views would sometimes be impressed by very extraordinary and unexpected results. We select the following as an example, for reasons which will be suggested by the narrative. We are indebted to Mr. Wood*, of Rochdale, for the illustration; and, as we should only mar the scene by any abbreviation, we must allow him to tell it in his own manner:

"It was on his first going through the wards after a visit to "Bath, that, passing up between the rows of beds, with an im- "mense crowd of pupils after him—myself among the rest—that "the apparition of a poor Irishman, with the scantiest shirt I "ever saw, jumping out of bed, and literally throwing himself on "his knees at Abernethy's feet, presented itself. For some "moments, everybody was bewildered; but the poor fellow, with "all his country's eloquence, poured out such a torrent of thanks, "prayers, and blessings, and made such pantomimic displays of "his leg, that we were not long left in doubt. 'That's the leg, "'yer honnor! Glory be to God! Yer honnor's the boy to do "'it! May the heavens be your bed! Long life to your "'honnor! To the divole with the spalpeens that said your "'honnor would cut it off!' &c. The man had come into the "hospital about three months before, with a diseased ankle, and "it had been at once condemned to amputation. Something, "however, induced Abernethy to try what *rest* and constitutional "treatment would do for it, and with the happiest result.

"With some difficulty the patient was got into bed, and "Abernethy took the opportunity of giving us a clinical lecture "about diseases and their constitutional treatment. And now "commenced the fun. Every sentence Abernethy uttered, Pat "confirmed. 'Thrue, yer honnor, divole a lie in it. His honnor's "'the grate dochter entirely!' While, at the slightest allusion "to his case, off went the bed clothes, and up went his leg, as if he "were taking aim at the ceiling with it. 'That's it, by gorra! "'and a bitther leg than the villin's that wanted to cut it off.'

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* The interesting letters of Mr. Wood and Mr. Stowe were placed beside each other, and, in selecting extracts, in the first edition, Mr. Stowe's name occurred in this place instead of Mr. Wood's—a mistake for which we beg these gentlemen to accept the assurance of our regret.

"This was soon after I went to London, and I was much struck "with Abernethy's manner; in the midst of the laughter, stooping down to the patient, he said with much earnestness: 'I am "'glad your leg is doing well; but never kneel, except to your "'Maker.'"

The following letter, though containing nothing extraordinary, still shows his usual manner of addressing a patient by letter:

"Sir,

"In reply to your letter, I can only say what I must have "said to you in part, when you did me the honour of consulting "me.

"Firstly. That the restoration of the digestive organs to a "tranquil and healthy state, greatly depends on the strict observance of rational rules of diet. My opinions on this subject, "which are too long to be transcribed, are to be met with at "page 72, of the first part of 'Abernethy's Surgical Observations,' "published by Longman and Co., of Paternoster Row.

"Secondly. Upon keeping the bowels clear, yet without "irritating them by over-doses of aperient medicine.

"Thirdly. I consider the blue pill as a probilious medicine, "and only urge that the dose be such as to do no harm, if it fail "to do good, and then to be taken perseveringly for some time, "in order to determine whether it will not slowly effect the object "for which it was given. In gouty habits, carbonate of soda, "&c., may be given, to neutralize acidity in the stomach, with "light bitters; but the *prescription of medicines of this kind*, "as also any advice relative to the cold bath, must rest with your "medical attendant."

Dated the 17th of September; as usual, with him, without the year, which was about 1824.

It is obvious that very few professional letters are adapted for introduction. This was one kindly sent us by Mr. Preston, of Norwich, and was written to a gentleman in Yorkshire.

Few things were more pleasing or valuable in Abernethy, than his modesty and his sense of justice. He knew his superiority well enough, but he measured it—as Science shows us all should do—with reference to what was still beyond him, and not by the standard afforded by the knowledge of others. His sense of justice was, we think, never appealed to in vain. The following letter has appeared to us significant in relation to these points. Amid the peaceful glories of a useful profession, there is nothing that sinks deeper or interests our regard more, than a man, in the hour of success, remembering what is due to others. We think this remark particularly applicable to the late Mr. Tait, in the following case. The letter from Abernethy was obligingly sent us by Mr. Tait's son and successor. The remarks with which Mr. Tait concludes his case, are as creditable to the writer as to him whom they were intended to honour.

We have stated that Mr. Abernethy had been the first to extend the application of John Hunter's celebrated operation for the cure of aneurism, to a vessel nearer the heart (the external iliac artery), on which Mr. Abernethy placed a ligature in 1797. Mr. Tait, of Paisley, had an extraordinary case of aneurism in both lower extremities, so high up as to oblige him to place a ligature on the external iliac artery on both sides of the body. The case occurred in an old dragoon, and the two operations were performed at separate times, with great judgment and with complete success. The case of course made some noise, and was highly creditable*. In closing his account of the patient, Mr. Tait observes : " The complete success which has attended these " operations, while, certainly, it affords me one of the highest " gratifications the practice of my profession can procure me, " chiefly affects Mr. Abernethy.

" Accident has placed under my care a case which, so far as " I know, is unparalleled in the history of surgery, and it has " been cured; but I have only put in practice what every surgeon " of the day ought to have done. When, thirty years ago, Mr. " Abernethy formed the firm resolve of cutting open the walls of " the abdomen and seizing the external iliac artery, he made a " mighty step in advance, he formed an epoch in the history of

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* Edinburgh Medical and Surgical Journal, vol. xxvi.

"his profession. John Hunter, upon reflecting on the hæmorrhage proceeding from the vessel below the sac, after an operation in 1779, when Mr. Broomfield, 'for security,' had tied the artery three or four inches above the aneurism, had probably the first glimpse at his great improvement of tying the artery, in cases of aneurism, nearer the heart. His eminent successor has extended the principles of the illustrious Hunter.

"So firmly impressed was Mr. Abernethy with the certainty of ultimate success, that, nothing daunted by the unfortunate issue of his two first cases, he persevered, and at length successfully secured the external iliac artery. His steps have been followed by a host, till at length it needed but such a case as mine to add the finishing touch to his well-earned fame. In doing justice to the merits of such men, we act but the part of prudence; since, if we do not, indignant posterity will.

"Paisley, January, 1826."

The following is Abernethy's reply to a communication from Mr. Tait on the subject, and couched in a tone, just in relation to Mr. Hunter, modest and characteristic as regards himself.

"TO DAVID TAIT, ESQ.

"SURGEON, PAISLEY.

"Dear Sir,

"I have read your interesting case in the 'Edinburgh 'Journal,' but have no comments to offer. I have therefore only to thank you for the honourable mention you have made of me. The progress of science has given us reason to confide in the anastomosing* channels for carrying on the circulation. The only question necessary to be decided was—would *large* arteries heal when tied? Every case confirmed that

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* The name applied to the collateral branches which carry on the circulation when the main artery of limb is tied or obstructed.

"point, and therefore there was little merit in perseverance. "Nevertheless, I feel grateful for your good opinion, and with "congratulation and best wishes,

"I am, dear sir,
"Yours very sincerely,
"JOHN ABERNETHY."

"Bedford Row, July 14."
(Post mark 1826.)

The following portion of a note, necessarily mutilated by the suppression of professional matter, we copy as a written evidence of his not *in any way* appearing to alter or add to a treatment which he approved. It is written to a highly esteemed member of our profession, Mr. Beaman, of King Street, Covent Garden. Mr. Beaman had sent a patient alone to Mr. Abernethy, who, having seen him, gave him the following note:

"My dear Sir,

"The patient says"—here the symptoms referring to the point to be investigated are stated—"and if this be true, I have no wish * * * * nor can I suggest better treatment than that which you have adopted.

"Yours very sincerely,
"JOHN ABERNETHY."

(No date, post mark 1825.)

The following letter to Mr. Wood, of Rochdale, reiterates his opinion on a very important disease, contraction of the gullet or œsophagus, and conveys a practical truth, which, if we may judge from the cases published in the periodicals, is just as necessary as ever. We allude to the too officious use of instruments in this affection, a lesson of Abernethy's, of the practical excellence of which Mr. Wood had convinced himself by his own experience, as we ourselves have on many occasions.

"My dear Sir,

"I think as you do with regard to the difficulty of swallow-

"ing. It seems likely to be the effect of irritability of the "stomach; and if so, the *passing of instruments, however soft* "*and well-directed they may be,* is not likely to be beneficial.

"Indeed, I have seen so little good from such measures, that "I should feel reluctant to employ them until impelled by "stronger necessity than exists in the present case. Spasmodic "affection in the part is, as you know, exceedingly common, and "*continues* for a great many years without producing permanent "contraction. With respect to the main object of the treatment "of this case, I cannot say more than you are already acquainted "with, and which is suggested at page 72.

"I have of late been personally convinced of the benefit of "the strictest attention to diet. Last summer, my stomach was so "disordered that it would not digest any thing, and I was constantly tormented by the chemical changes which the food "underwent in that organ. I had scarcely any flesh on my "bones, and sometimes every ten minutes was seized with rheumatic spasms, which were as general and severe as those of "tetanus*. I went into the country, where I could get good "milk and eggs, and lived upon three ounces of baked custard "taken three times a day, drinking, four hours after each meal, "some boiled water that had been poured upon a small quantity "of ginger. Upon this quantity of food I regained my flesh, "and uniformly got better as long as I continued this plan of "diet, which was but for one month, for then I returned to "town. From the very first day, I had no more of these spasms. "As for medical treatment, I repeat that I cannot say more than "you already know. It gives me pleasure to find that you are "settled to your satisfaction.

"I remain,
"My dear Sir,
"Very sincerely yours,
"JOHN ABERNETHY."

"Bedford Row, January 9."

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* Locked-jaw.

CHAPTER XXVII.

OF MANNER.

"Non ego paucis,
Offendar maculis, quas aut incuria fudit,
Aut humana parum cavit natura."
HORACE.

"I will not be offended by a few blemishes, the result of inattention, or against which human frailty has not sufficiently guarded."

MANKIND have long established, by universal consent, the great importance of "Manner." It has been so ably and so variously discussed by different writers, that it is next to impossible to say any thing new on the subject, or what has not been even better said on the subject already. Still it is equally true that it is a thing very much less cultivated than its influence demands; so that really easy, good manners continue to be a very rare and enviable possession. But if manner be thus influential in the ordinary intercourse of life, it is still more important in ministering to disease. People, when they are ill, have, for the wisest purposes, their susceptibilities more vivid; and it is happy for them when those in health have their sympathies—as is natural, we think, that they should be—quickened in proportion. No doubt it is a great subtraction from whatever benefit the most skilful can confer, if it be administered in a dry, cold, unfeeling, or otherwise repulsive manner. There is too a very sound *physiological* as well as *moral* reason for kindness. It is difficult to overrate the value of that calm which is sometimes diffused over the whole system by the impression that there is an unaffected sympathy in our sufferings. We have of course, in our time, observed abundant varieties of manner in our professional brethren; and we have often listened with interest to conversations in society, in which the manners of various medical men have been the subject of discussion, from which good listeners might, we think, have often taken valuable lessons.

We are convinced that the disguise, worn by some, of an artificial manner, leaves, on many occasions, no one more deceived than the wearer. Many patients have their perceptions remarkably quickened by indisposition, and will penetrate the thin veil of any form of affectation much more readily than people imagine. In common language, good feeling and kind manner are said to spring from the heart. If a man feels kindly, he will rarely express himself otherwise, except under some momentary impulse of impatience or indisposition.

There is no doubt that the secret of a kind and conciliatory manner consists in the regulation of the feelings, and in carrying into the most ordinary affairs of life that principle which we acknowledge as indispensable in serious matters—of doing to others as we would they should do to us.

We are not speaking of a *polished* manner; that is another affair. A man's manner to a patient may be unpolished, or as homely as you please; but if he really feels a sympathy for his patient, it will, with the exception to be stated, never be coarse or unkind.

Some men are absurdly pompous; others, hard and cold; some put on a drawling, maudlin tone, which the most superficial observer detects as being affected. An honest sympathy is more acceptable than even a polished manner; though doubtless that is a very desirable grace to a learned profession.

In general, our own experience—and we know something of indisposition in our own person—has induced us to judge favourably of the manner of medical men.

There are, no doubt, exceptions, and sometimes in men in whom you would least expect it. We have known men "eye" a patient, as if looking at some minute object; some, jocosely familiar. One man has an absurd gravity; another thinks he must be all smiles. We have known, too, the adoption of a tone characterized by a sort of religious solemnity. These, when assumed, are generally detected, and of course always vulgar. Some even say really rude and unfeeling things, before any thing has happened to provoke them. We attended a gentleman who had a great deal of dry humour, and who was very amusing on such matters. One morning, he said, "I saw Dr. —— on one occasion, and the first thing he said to me I thought he might as well have omitted. 'I see, sir,' said he, 'that you have taken the shine out of your constitution.'"

Abernethy's manner was at times—always, in serious cases, and, so far as we ever observed, to hospital patients—invariably, as unaffectedly, kind as could be desired. It is too true that, on many occasions of minor import, that impulsiveness of character which we have seen in the boy, was still uncontrolled in the man, and led him to say things which, however we may palliate, we shall not attempt to excuse.

It is true his roughness was very superficial; it was the easiest thing in the world to develop the real kindness of heart which constantly lay beneath it; and it is very instructive to observe how a *very little yielding* to an infirmity may occasionally obscure one of the most benevolent hearts that ever beat in a human breast, with the repulsive exterior of ungentle manners. Still, patients could not be expected to know this; and therefore too many went away dissatisfied, if not disgusted.

The slightest reaction was, in general, sufficient to bring him to his self-possession. A lady, whom he had seen on former occasions, was one day exceedingly hurt by his manner, and burst into tears. He immediately became as kind and patient as possible, and the lady came away just as pleased as she had been at first offended.

Reaction of a different kind would answer equally well. One day, a gentleman consulted him on a painful affection of his shoulder, which had been of a very excruciating character. Before he had time to enter on his case, Abernethy said, "Well, I know nothing about it." The gentleman sharply retorted: "I do

" not know how you should; but if you will have patience till I " tell you, perhaps you then may." Abernethy at once said, " Sit down;" and heard him out, with the greatest kindness and patience.

I am indebted to Thomas Chevasse, Esq. of Sutton Coldfield, Warwick, for the following letter to a patient in Surrey, who had complained that he did not receive any sympathy from him.

" Dear Sir,

" I am sorry to have said any thing that has offended you. " I may have felt annoyed that I could not suggest any plan of " treatment more directly curative of your malady, and expressed " myself pettishly when you did not seem to understand my meaning; for I am a fellow-sufferer, and had tried what are considered to be appropriate remedies, unavailingly. I assure you " that I did not mean to hurt your feelings, and that I earnestly " hope the state of your health will gradually improve, and that " your local maladies will decline in proportion.

" I am, dear Sir,
" Your obedient servant,
" JOHN ABERNETHY."

" Bedford Row, October 25."

A surgeon was requested to visit a patient in one of the suburbs of the metropolis. When he arrived there, he had to mount two or three dilapidated steps, and to read a number which had been so nearly worn away, that he was enabled to determine whether it was the number he sought only by the more legible condition of its two neighbours. Having applied a very loose, dilapidated knocker, an old woman came to the door.

" Does Captain ——— live here?"

" Yes, sir."

" Is he at home?"

" Yes, sir. Please, sir, may I be so bold—are you the doctor, " sir?" " Yes."

" Oh! then, sir, please to walk up."

The surgeon went up a small, narrow staircase, into a moderate-sized, dirty, ill-furnished room, the walls of which were coloured something between yellow and red, with a black border. An old man, in a very shabby and variegated *deshabille,* rose from his chair, and, with a grace worthy of a court, welcomed the stranger. His manner was extremely gentlemanly, his language well chosen, the statement of his complaint particularly simple and clear. The surgeon, who, like most of us, sees strange things, was puzzled to make out his new patient; but concluded he was one of the many who, having been born to better things, had been reduced by some misfortune to narrow circumstances. Everything seemed to suggest that construction, and to warrant no other. Accordingly, having prescribed, the surgeon was about to take his leave, when the old gentleman said:

"Sir, I thank you very much for your attention;" at the same time offering his hand with a fee.

This the surgeon declined, simply saying:

"No, I thank you, sir. I hope you will soon be better. "Good morning."

"Stay, sir," said the old gentleman; "I shall insist on this, "if you please;" in a tone which at once made the surgeon feel that it would be painful and improper to refuse. He accordingly took it. The old gentleman then said, "I am very much obliged "to you, sir; for had you not taken your fee, I could not again "have the advantage of your advice. I sent for you because I "had understood that you were a pupil of Mr. Abernethy's, for "whom I could not send again, because he would not take his "fee; and I was so hurt, that I am afraid I was almost rude to "him. I suppose, judging from the appearance of things here "that I could not afford it, he refused his fee; on which I begged "him not to be deceived by appearances, but to take it. However, he kept retreating and declining it, until, forgetting myself "a little, and feeling somewhat vexed, I said, 'By G—, sir, I "'insist on your taking it!' when he replied, 'By G—, sir, I "'will not!' and, hastily leaving the room, closed the door after "him."

This gentleman has been dead some years. He lived to a very advanced age—nearly, if not quite, ninety—and had many instructive points of character. He was really in very good circumstances; but he lived in a very humble manner, to enable him to assist very efficiently some poor relations. To do this, he saved all that he could; and although he insisted on the surgeon taking a fee when he visited him, he said that he should not hesitate to accept his kindness when he called on the surgeon. The intercourse continued many years; but with rather a curious result.

After a time, growing infirmities converted what had been a visit—perhaps once or twice a year—into occasional attendances, when the rule he had prescribed to himself, of paying visits at home, became characterized by very numerous exceptions; and, at last, by so many, that the rule and the exception changed places. The surgeon, however, went on, thinking that the patient could not do other without disturbing existing arrangements. When, however, the old getleman died, about four hundred guineas were found in his boxes, wrapped up, and in various sums, strongly suggestive of their having been (under the influence of a propensity too common in advancing life) savings, from the somewhat unnecessary forbearance of his medical attendant. We know one other very similar occurrence.

Sometimes Mr. Abernethy would meet with a patient who would afford a useful lesson. A lady, the wife of a very distinguished musician, consulted him, and, finding him uncourteous, said, "I had heard of your rudeness before I came, sir; but I "did not expect this." When Abernethy gave her the prescription, she said, "What am I to do with this?"

"Anything you like. Put it in the fire, if you please."

The lady took him at his word—laid his fee on the table, and threw the prescription into the fire, and hastily left the room. Abernethy followed her into the hall, pressing her to take back her fee, or to let him give her another prescription; but the lady was inexorable, and left the house.

The foregoing is well-authenticated. Mr. Stowe knows the lady well, who is still living. But many of these stories, to our own knowledge, were greatly exaggerated. Abernethy would sometimes offend, not so much by the manner as by the matter; by saying what were very salutary, but very unpleasant truths, and of which the patient perhaps felt only the sting. We know a gentleman, an old fox-hunter, who abused Abernethy roundly; but all he could say against him was: "Why, sir, almost the "moment I entered the room, he said: 'I perceive you drink a "'good deal,'" which was very true. "Now," added the patient, very *naïvely,* "suppose I did, what the devil was that to him!"

Another gentleman, of considerable literary reputation, but who, as regarded drinking, was not intemperate, had a most unfortunate appearance on his nose, exactly like that which frequently accompanies dram-drinking. This gentleman used to be exceedingly irate against Abernethy, although all I could gather from him amounted to nothing more than this, that when he said his stomach was out of order, Abernethy observed, "Ay, I see that "by your nose," or some equivalent expression.

However rough Abernethy could occasionally be, there was, on grave occasions, no feature of his character more striking than his humanity. Dr. Barnett* had a case where Abernethy was about to perform a severe operation. The Doctor, at that time a young man, was anxious to have every thing duly prepared, and had been very careful. When Abernethy arrived, he went into the room into which the patient was to be brought, and, looking on the instruments, &c. on the table, said: "Ay, yes, that is all "right;" then, pausing for a moment, he said: "No, there is "one thing you have forgotten;" and then, throwing a napkin over the instruments, added: "It is bad enough for the poor "patient to have to undergo an operation, without being obliged "to see those terrible instruments."

Few people get off so badly in the world as poor gentlemen. There are multifarious provisions in this kingdom for all sorts of claimants; but a poor gentleman slips down between those which are not applicable to his case, and those which are too repulsive to be practicable. His sensibilities remain—nay, perhaps are sharpened—and thus, whilst they tend to exasperate his wants, they increase the difficulty of supplying them. There is here afforded a grateful opportunity for the indulgence of what we believe, amidst some exceptions, to be the ruling spirit of medical men: a sensitive philanthropy, which no men in the world are more liberal in disbursing. Abernethy had his full share of this excellence. There are multitudes of instances exemplifying it. We are indebted for the following to Mr. Brown, of the respected firm of Longman and Co. Abernethy was just stepping into his carriage to go and see the Duke of ——, to whom he had been sent for in a hurry, when a gentleman stopped him to say that he should be very glad if he could, at his leisure, pay Mr. —— another visit at Somers Town. Abernethy had seen this poor gentleman before, and advised a course which it appeared that the patient had not resolution to follow. "Why," said Abernethy, "I can't go now, I am going in haste to see the "Duke of ——." Then pausing a moment before he stepped into the carriage, he looked up to the coachman and said, quietly, "Somers Town." This is very characteristic. The fidgetty irritability of his first impression at interference, and the beneficence of his second thought.

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* This gentleman, who retired some years since from practice, died at Norwood, about a month ago, at the age of 73. Dr. Barnett was born at Malmesbury, and was an early pupil of Abernethy's, and a friend of Dr. Jenner's; he practised many years as a general practitioner in Charter-House Square, where he realized, we believe, a comfortable competency. He was distinguished by a singularly mild, gentlemanly, and inoffensive bearing, not less than by the confidence reposed in his skill and judgment by a large list of patients and friends.

Dr. Thomas Rees knew a gentleman who was a man of ability, who had been a long time ill, and who got a scanty living by his writings. Dr. Rees called on Abernethy, one morning, and told him that the gentleman wished to have his opinion; but that he had heard such accounts of him, he was half afraid to see him. "And if he were not," said Dr. Rees, "he is not able to pay "you. He is a great sufferer, and he gets his living by working "his brains." "Ah!" said Abernethy; "where does he live, "do you say?" "At ———," mentioning a place full two miles distant. Abernethy immediately rang the bell, ordered his carriage, visited the gentleman, and was most kind to him.

One day, a pupil wished to consult him, and found him, about ten minutes before lecture, in the museum, looking over his preparations for lecture—rather a dangerous time, we should have said, for consultation. "I am afraid, sir," said the pupil, "that "I have a polypus in my nose, and I want you to look at it." No answer; but when he had sorted his preparations, he said: "Eh! what?" The pupil repeated his request. "Then stand "upon your head; don't you see that all the light here comes "from a skylight? How am I to look up your nose? Where "do you live?" "Bartholomew Close." "What time do you "get up?" "At eight." "That can't be then." "Why, "sir?" "You cannot be at Bedford Row at nine." "Yes, "sir, I will." "To-morrow morning, then." The pupil was punctual. Mr. Abernethy made a most careful examination of his nose, entered into the causes and nature of polypi, assured him that there was nothing of the sort, and exacted from him a promise that he would never look into his nose again. The gentleman, in his letter to me, adds: "This I have never done, and "I am happy to say that there has never been any thing the "matter."

The following we have from a source of unquestionable authority:

Abernethy was attending a poor man, whose case required assistance at a given time of the day. One morning, when he was to see this patient, the Duke of York called to say that the Prince of Wales wished him to visit him immediately. "That I "cannot do," said Mr. Abernethy, "as I have an appointment "at twelve o'clock"—the time he promised to visit the poor man. "But," said the Duke, "you will not refuse the Prince; "if so, I must proceed to ———." "Ah!" said Abernethy, "he will suit the Prince better than I should." He was, however, again sent for, a few hours later, when he of course visited the Prince.

Very many instances of his liberality were constantly occurring. The following is a specimen:

The widow of an officer of limited income brought her child some distance from the country to consult Abernethy. After a few weeks' attendance, the lady having asked Abernethy when she might return home, was told that she must remain some weeks longer, or he could not answer for the well-doing of the case. In the meantime, having learned how the widow was situated, he continued to take the fees, folding them up in a paper. When he finally took his leave, he returned home, enclosed the fees which he had received, with the addition of a cheque for £50, with a kind note, saying, that as he understood her income was limited, he had returned the fees, with an addition, which would enable her to give the child, who could not walk, a daily ride in the fresh air, which was important to her recovery.

He was, indeed, as it appeared to us, most liberal in the mode of conducting his practice. When asked by a patient when he desired to see them again, it was at the longest period compatible with a reasonable observation of the case; and we doubt whether he ever took a fee where he had even a *doubt* as to the circumstances of the patient justifying his so doing. It would be easy to multiply examples of this; but it would be a constructive injustice to others to appear to bring things out in high relief, or as *special* excellences, which (notwithstanding some exceptions) from our hearts we believe to be a prevailing characteristic of the profession.

Abernethy had been, nearly all his life, without being improvident, habitually careless of money; and, although he provided his family with a comfortable competency, which very properly left their position unaltered by his death, yet we doubt if ever any man, with the opportunity of making so much, availed himself of that opportunity so little.

Many instances occurred of his carelessness in these matters.

He used to put his not very slowly accumulating fees anywhere; sometimes by the side of his portfolio; sometimes on a shelf in his bookcase, between something else which might be there. When he retired from Bedford Row, they found a considerble heap of fees which he had placed in the bookcase and forgotten—an anecdote which shows that he must have been making some way in practice as early as his marriage, exemplifies this sort of carelessness, and suggests its impropriety. He was in the habit, even then, of leaving his fees on his table in his private room. He thought, on more than one occasion, that some had been removed: he, however, said nothing; but, having taken means to assure himself of the fact, he marked some fees and allowed matters to go on as usual. Again missing fees, he waited till the whole party, which consisted of pupils residing in the house, were settled at breakfast. "Gentlemen," he said, "I "must beg you to give me your purses." This was of course immediately done. In one of the purses he found the marked fees. This individual has been dead many years. He turned out, as may be supposed, *badly*.

It had become the fashion in Abernethy's latter days to speak lightly of him as an operator; and we have very little desire to rest any portion of his reputation on this branch of our duty. Nevertheless, when we first knew Abernethy, if we had had to be the subject of an operation, we knew no man to whom we should have submitted with the same confidence. He was considerate and humane; he did as he would be done by; and we have seen him perform those operations which are usually regarded as the most difficult, as well as we have seen them ever performed by any body; and without any of that display or effect too often observed, which is equally misplaced and disgusting.

His benevolent disposition led him to feel a great deal in regard to operations. Like Cheselden and Hunter, he regarded them, as in a scientific sense they truly are, the reproach of the profession; since, with the exception of such as become necessary from accidents, they are almost all of them consequent on the imperfection of Medicine or Surgery as a science.

Highly impulsive, Abernethy could not at all times prevent the expression of his feelings, when perhaps his humanity was most earnestly engaged in his suppression of them. It was usually an additional trial to him when a patient bore pain with fortitude.

One day, he was performing rather a severe operation on a woman. He had, before commencing, said a few words of encouragement, as was usual with him, and the patient was bearing the operation with great fortitude. After suffering some seconds, she very earnestly, but firmly, said, "I hope, sir, it will not be long." "No, indeed," earnestly replied Abernethy; "that would indeed be horrible."

In fact, he held operations as occupying altogether so low a place in our duties, and as having so little to do with the science of our profession, that there was very little in most of them to set against that repulsion which both his science and his humanity suggested.

As he advanced in life, his dislike to operations increased. He was apt to be fidgetty and impatient. If things went smoothly, it was all very well; but if any untoward occurrence took place, he suffered a great deal, and it became unpleasant to assist him; but he was never unkind to the patient. It is, however, not always easy to estimate correctly the amount of operative dexterity. Hardly any man will perform a dozen operations in the same manner. We have seen a very bungling operator occasionally perform an operation extremely well; whilst the very worst operation we ever saw was performed by a man whose fame rested almost entirely on his dexterity; and what made it the more startling, was that it was nothing more than taking up the femoral artery. But whether it were that he was not well, or had been careless *in the site* of his first incision, or in *opening the sheath* of the vessels before he passed his ligature, or all of these causes in conjunction, we could not tell, because we were not quite near enough; but we never witnessed a more clumsy affair.

The conditions calculated to ensure good operating, are few and simple; there are *moral* as well as medical conditions; and no familiarity ever enables a surgeon, on any occasion, *safely* to dispense with any of them. When they *are all* observed, operating usually becomes steady and uniform; when *any* of them are dispensed with or wanting, there is always risk of error and confusion.

We are afraid that we should be hardly excused in a work of this kind, were we to lay down the canons to which we allude. We cannot, therefore, enter any further into the subject.

Previously to offering a few remarks on the causes of Abernethy's occasional irritability, we must not omit to mention a hoax that was played on him. He had been in particularly good, boy-like spirits, and had proposed going to the theatre; where he had enjoyed himself very much. On reaching home, there was a message desiring his attendance at Harrow. This was a very unwelcome finale. The hoax had been clumsily managed, but it did not strike anybody at the moment; so it was decided that Mr. Abernethy must go; and he took Mr. Skey with him. When they got to Harrow, they drove to the house of the surgeon, and, knocking him up, the surgeon came to the window in his night-cap, when the following dialogue began. The name of the patient we shall suppose to be Wilson.

"Does Mr. Wilson live here?"

"Who are you?"

"I say, then, is Mr. Wilson living here?"

"I say what do you want? Who the d—l are you?"

"I say that I want to find a Mr. Wilson; and my name is "Abernethy."

"Immediately," says Mr. Skey, "off flew the night-cap."

"I beg your pardon, Mr. Abernethy; what can I do for "you," &c.

"Is there a Mr. Wilson living here; and has he broken his "leg?"

"Oh, yes, sir, he is living here; but he is very well, and has "not met with anything of the kind."

Abernethy laughed heartily, and ordered the post-boy to drive him home again.

There would be no difficulty in multiplying anecdotes given to Abernethy; but there are some objections to such a course. In the first place, there are many told of him which never happened; others, which may probably have happened, you find it impossible to authenticate; and, lastly, there is a third class, which, if they happened to Abernethy, certainly happened to others before Abernethy was born. In fact, when a man once gets a reputation of doing or saying odd things, every story in which the chief person is unknown or unremembered is given to the man whose reputation in this way is most remarkable. We need not say how impossible it is, in a Memoir of this kind, to introduce, with propriety, matters thus apocryphal.

We have no doubt that, with a most benevolent disposition, Abernethy's manner, particularly as he advanced in years, evinced great irritability ; and we believe that it was the result of two or three different causes, which, in their combined influence, got a mastery which the utmost resolution was not at all times able to control. It had formed the subject of numerous conversations between Abernethy and some of his most intimate friends, and we believe had arisen, and been unconsciously fostered by the following causes: "In early life, he had been," as he told Dr. Thomas Rees, "particularly disgusted with the manner in which "he had seen patients caressed and 'humbugged' by smooth and "flattering modes of proceeding, and that he had early resolved "to 'avoid that at all events.'" He further observed: "I tried "to learn my profession, and thinking I could teach it, I educated myself to do so; but as for private practice, of course I am "*obliged* to do that too." We can easily understand how, in a sensitive mind, an anxiety to avoid an imputation of one kind might have led to an opposite extreme; and thus an occasional negligence of ordinary courtesy have taken the place of a disgusting assentation.

A temper naturally impulsive, would find in the perplexities which sometimes beset the practice of our profession, too many occasions on which the suggestions of ruffled temper, and of fear of improper assentation, would unfortunately coincide; and thus tend to intermix and confound the observance of a praiseworthy caution, with a yielding to an insidious habit. If to this were now added that increase of irritability which a disturbed and fidgetty state of physique never fails to furnish, and from which Abernethy *greatly suffered*, the habit would soon become dominant; and thus an originally good motive, left unguarded, be supplanted by an uncontrolled impulse. We believe this to have been the short explanation of Abernethy's manner; all we know of him seems to admit of this explanation. It was a habit, and required nothing but a check from his humanity or his good sense to correct it; but then this was just that which patients were not likely to know, and could have been still less expected to elicit.

Again, most men so celebrated are sure to be more or less spoile. They become themselves insensibly influenced by that assentation which, when detected, they sincerely despised. The moral seems to be, that the impulses of the most benevolent heart may be obscured or frustrated by an irritable temper; that habits the most faulty may rise from motives which, in their origin, were pure or praiseworthy; that it is the character of Vice to tempt us by small beginnings; that, knowing her own deformity, she seldom fails to recommend herself as the representative, and too often to assume the garb, of Virtue; that the most just and benevolent are not safe, unless habitual self-government preside over the dictates of the intellect and the heart, and that the *impulse* to which *assent* is yielded to-day, may exert the influence of a command to-morrow; that, in fact, we must be masters or slaves.

> "Rege animum qui nisi paret
> Imperat."

The views which we have thus ventured on submitting, are verbatim those which appeared in the former editions of these Memoirs, and, consequently, were written long before we were favoured with the following letter. It was written to his daughter Anne, before her marriage with the late Dr. Warburton, dated Littlehampton, August 13, and is remarkably corroborative of some of the preceding remarks.

"My dear Anne,

"Lack of employment is, as I believe, the cause of your "receiving this note in reply to the one I received from you by "your mother. Certain I am that I never thought of writing an "answer till just now, when it occurred to me that it would be "polite to do so, which very phrase had nearly prevented the "intention. Why have all the legitimate children of John "Bull an aversion to politeness? 'Tis because it so commonly "covereth a multitude of sins; because, with honest simplicity,

“they have often caught hold of the garb and found that it con-
“cealed deformity and malice. I frankly acknowledge that I may
“have carried my detestation too far, because it does not necessarily
“follow that our best friends should not wear becoming and
“fashionable apparel. I like to see them *en deshabille,* however.
“’Tis the man, and not the dress, I am concerned about. I tell you,
“sincerely, that I take your note to be one of many evidences of
“your having both a good head and heart. Other young ladies
“would have spoken to mamma. Enough of this unprofitable chat.

“Yours ever,
“JOHN ABERNETHY.”

“Little Hampton, 13th August.”

When the editors of the medical periodicals first began to publish the lectures given at the different hospitals, there was considerable discussion as to the propriety of so doing. The press, of course, defended its own views in a spirit which, though not always unwelcome to readers, is frequently “wormwood” to the parties to whom the press may be opposed.

We are not lawyers, and therefore have no claim to an opinion, we suppose, on the “right;” but, as regards the general effect of this custom *as now practised,* we are afraid (however advantageous it may be to the trade to obtain gratuitously these bulky contributions to their columns) that doubts may not be unreasonably entertained whether it is of advantage to science, to the character of our periodical literature, or the profession.

The publicity which it gives to a man’s name, induces men to contribute matter which it would often have been, perhaps, more advantageous to them to have suppressed; and the proprietors, so long as a periodical “pays,” are not likely to quarrel with that which they get for nothing but the expense of publication.

Mr. Abernethy was very much opposed to the publication of his lectures; but, though not insensible by any means to the occasionally caustic remarks of the press, he does not seem to have been much annoyed by them.

The following is an extract from a letter, in which he expresses himself as opposed to the conduct of those who publish lectures without the permission of the authors. We suppress that part, because it involves his opinion of the conduct of individuals. As regards his personal feelings, he says:

"Though I have been so long in replying to your letter, I "have felt very grateful for the kindness which induced you to "take up the cudgels in my behalf. At the same time, I must "say that, had I been at your elbow, I should have hinted to you "that the object was not worth the trouble you have been so "good as to bestow upon it. No one can expect to escape "slander and misrepresentation; and these are so commonly "bestowed upon all, that they have little or no influence on the "minds of persons of character and judgment.

"With many thanks and best wishes,

"I remain, my dear sir,

"Yours very sincerely,

"JOHN ABERNETHY."

SECTION.

When Mr. Abernethy was appointed *surgeon* to St. Bartholomew's Hospital, in 1815, he had already been twenty-eight years assistant surgeon, and was therefore fifty years of age before he had an opportunity of taking an active share in the practical administration of the Hospital. This is one of the many effects of a System of which we shall presently give a sketch. He was thus invested with the additional duties of Surgeon of the Hospital, and Professor to the College of Surgeons, at a time of life when most people, who have commenced young and laboured had with their intellects, as distinguished from their hands, begin to feel their work. This was the case with Abernethy. We do not think that his original physical organization was to be complained of; he had been active and energetic, he was of moderate stature and well-proportioned; a magnificently poised brain, judging phrenologically; and, in short (under favourable circumstances), he appeared to have had the elements of long life; but we think that his organization—and especially the presiding power, the nervous system—was ill-adapted either for the air, the anxieties, or the habits of a crowded city; or the somewhat pestilential atmosphere of a dissecting-room.

We saw him, therefore, ageing at fifty very sensibly, and rather more than is in general observable at that period. He complained, in 1817, of the fatigue of the College lectures, coming, as they did, on the completion of a season of the "mill-round" of hospital tuition and practice. So that, when we mentioned the period of his lectures at the College as on so many accounts the zenith of his career, there was the serious drawback arising from a certain diminution of strength which had never been, at best, equal to the *physical* fatigue of his multiform avocations. All this arose partly out of a System, which, although, like all evils, not allowed to proceed without being charged with elements of remotely prospective correction, has been the parent of much mischief. This is what we have called the "Hospital System," some of the more important features of which we will now present to our readers.

CHAPTER XXVIII.

THE HOSPITAL SYSTEM.

> "—— Non hæc sine numine Divum
> Eveniunt."
>
> ÆNEID, lib. ii, l. 777.

IF we would view any human institution dispassionately, we must distinguish the vices of System from the faults of those who administer it.

Trite as this remark may be, the caution it involves is just that which is too frequently overlooked or unobserved. By a careful attention to the distinction it implies, we may develop the elements of rational reform, as contrasted with Utopian schemes; which, whatever of abstract truth they may contain, are frequently useless, simply because they are impracticable. We cannot effect any material change in human nature by any summary legislation, nor prevent the obtrusive necessities of daily life from bringing down the soaring aspirations of mind, to the humble level of the practicabilities of matter. Whoever, therefore, expects that any body of men, invested with irresponsible power, will hesitate to exercise it so as to procure, as they believe, the maximum of advantage to themselves,—might just as hopefully quarrel with the negro on account of his complexion. Do what you may, Man is Man "for a' that;" but whilst it is necessary to remember this, it is by no means so, to do it in a spirit of unkindness or hostility, nor in any sense opposed to brotherly love; but, on the contrary, in a tone of mind which, alike mild and uncompromising, desires to promote universal harmony and good feeling, by removing the temptations which experience has shown to be influential in disturbing such relations.

Neither should we quarrel with a man who endeavours to do the best he can for his family and friends. Should he, even in this pursuit, compromise his duty to the public, it is very *possible* that the objects which he had in view may have been in themselves praiseworthy, and therefore, instead of exasperating our blame, may readily *extenuate* faults which it may be impossible to excuse.

The truth is, that the interests of the public and of individuals are seldom, if ever, incompatible; the occasions on which they appear to be so are not unfrequent; those in which they really clash are extremely rare.

Wherever circumstances occur in which the temptation of a present fruition is found habitually to lead men to courses which, however apparently promotive of their own interests, are really detrimental to those of the public,—it becomes very necessary that the public should impose safeguards against such an injurious exercise of power.

The hospitals of London, as we formerly observed, are, in the main, very fine institutions. They are many of them very wealthy, which generally means powerful also.

The Governors, as they are termed, consist of certain noblemen and gentlemen; the latter being, for the most part, drawn from the more wealthy sections of the mercantile and trading classes.

The knowledge possessed by these gentlemen of the requisitions of a large public hospital, must (special instances excepted) be very measured; and be, in the main, derived from the medical officers with whom they are associated.

It thus happens that the administration of the hospital is in great part confided—as, with *some restrictions*, it ought to be—to the medical officers. The interests of these gentlemen, it may be assumed, would be best promoted by carrying out in the most efficient manner the benevolent objects of the institution: and we believe, looked at fairly and comprehensively, this would be really the case. The duties of a large hospital, however—if they are to be performed conscientiously—require much time, not a little labour, and some health to boot. Now all these, in a crowded community, are very costly articles; and which must, in justice—and, what is material, in fact too—be fairly remunerated. The public never *really* pay so dearly, as when they *appear* to get labour for nothing.

Here we come to the first defect in the "Hospital System."

It might be supposed that, with ample means, the Governors of Hospitals, by adopting such previous tests as were in their power, would have secured the most efficient officers, by paying them remunerative salaries; and, having retained them as long as their services were deemed efficient, or the duration of them justified, that they would have released them from the necessity of further exertion by a retiring pension. No such thing. The Hospital gives nothing: actually, there is a small nominal retaining fee, as it were, of about £60 to £100 a year, and the medical officer is left to obtain his remuneration for time, trouble, and health, by such private practice as his reputation or the *prestige* of being attached to an hospital may afford; from fees from pupils, or such other means as the position he occupies may place within his power.

He very naturally sets to work to do the best he can; and from this first budding, we very soon arrive at the full blossom of the System; one effect of which is, that, in hospitals, which have so large a care of public health—institutions which, whether correctly or incorrectly, give so much of the tone to the medical opinions of the day, which exert, either directly or indirectly, an influence on the claims of hundreds to public confidence—that in these hospitals there is *not one single surgeoncy that is fairly and bonâ fide open to scientific competition.*

Let us now examine a little into the machinery by which these results are brought out.

The experience afforded by the hospitals necessarily supplies abundant means for instructing students in surgery. They are accordingly admitted on paying certain fees to the surgeon; and this at once supplies a large revenue. This revenue is of course regulated by the number of pupils; and as there are in London many hospitals, so it follows that there is an active competition. Thus, some time before the season commences, the advertisements of the medical schools occupy a considerable space in the public journals, and circulars are also liberally distributed.

Well, the points here, as in all other cases, are the advantages offered, and the price paid—the maximum and minimum respectively. Here we arrive at the elements of numerous evils.

Students are not always—and before they try, hardly ever—judges of a school. The general reputation of a man (as he is never subjected to open competition) is no test whatever of his comparative power in *teaching* students; but they are accustomed to ascribe great importance to operations; and, *cæteris paribus,* they incline to prefer that hospital where the greatest number are supposed to be performed.

This arises from various causes; in some of which the public play no unimportant part. The student has perhaps seen, in the country, a good deal of medical and surgical practice; but very few operations. His stay in London is comparatively short, averaging, perhaps, not more than the better part of two years. Unnecessary length of time is generally inconvenient, always expensive, and the student is naturally anxious to see *most* of that which he will have *least* opportunity of observing elsewhere. Moreover, he knows that when he returns to the country he may save twenty limbs, before he obtains the same amount of *reputation* that he may possibly get by *one amputation*—the ignorance of the public, here, not appreciating results which very probably involved the exercise of the highest talent, whilst they are ready to confer a very profitable distinction on that which does not necessarily involve any talent at all.

We have no wish whatever, and certainly there is no necessity, for straining any point in reference to this very serious matter; but these two facts are indisputable—that the surgeons obtain their remuneration from the hospitals by the fees they obtain from the pupils; and, *cæteris paribus,* the pupils will flock the thickest where they expect to see most operations.

The next thing that we would submit, is that the *prestige* in favour of operations is both directly and indirectly opposed to the progress of scientific surgery. Almost all operations, commonly so termed, are examples of defective science. To practical common sense, therefore, it would appear a very infelicitous mode of obtaining the maximum of a man's genius in aid of the *diminution* of operations, to open to him a prospect of enriching himself by the *multiplication* of them. We desire to consider the subject with reference to its scientific bearings only, and would avoid entirely, were that possible, any appeal merely to the feelings. Such impulses, however right, are apt to be paroxysmal and uncertain, unless supported by the intellect. But, on such a subject, the feelings must necessarily become more or less interested. Wherever a system takes a wrong direction, a great many minor evils insensibly grow out of it.

The erection of a theatre for the purpose of operating, though founded on a feasible pretext, is a very questionable measure; and, unless of clear advantage to the profession or the public, is surely not without some character of repulsion. As regards art and science, it is certain that not more than twenty or thirty can be near enough in the theatre to see anything that can be really instructive in the performance of operations. In the absence of actual advantage, therefore, an exhibition of this kind is more calculated to give publicity to the surgeon operating, than it is to raise the tone or chasten the feelings of men about to enter a profession which almost daily establishes requisitions for our highest faculties. Operations without opportunities of real instruction, are merely unprofitable expenditure of valuable time. That which is viewed as a sort of *exhibition* to-day, may be with difficulty regarded in the light of a *serious duty* to-morrow. Were the object to tax the sensibility of a student, and blind him to any higher association with pain and suffering than that afforded by custom and chloroform, and to substitute for a dignified self-possession and sympathy with suffering, which each kept the other in due control, an indifference to everything save adroitness of manipulation and mechanical display,—no machinery could be better calculated to effect such objects; but science and humanity require very different qualifications, and experience has shown that they are neither incompatible nor beyond our power.

The humanity and science that beholds, in operative surgery, the lowest of our employments, and which would thence be impelled to seek, and as experience has taught us to seek successfully, to diminish the number of such exhibitions, and to lessen the suffering of those which are still retained, is perfectly compatible with coolness and skill in the performance of them.

When we speak of lessening pain, we must not be understood as alluding to chloroform, or agencies of that kind. We have, on the contrary, the greatest distrust of their utility; we do not hesitate to admit the propriety of their use in certain cases; but we are satisfied that, as at present employed, a very few years will make a great change. Many a so-called incurable case has been shown to be curable by the hesitation of the patient to submit to an operation. We have published some ourselves, wherein we joined in recommending the measure which the patient declined. Many deaths that we *do know* have already occurred from the use of chloroform; and a *significant* remark was made by a man who had considerable reputation in this way. He said: "Chloroform "is a good thing for operating surgeons."

To return from this digression. The most distinguished surgeons ever known in this country have shown us how to combine, in the highest degree, dexterity and skill, with science and humanity; together with a just estimate of the low position occupied by operations in the scale of our important studies. I may allude to two more particularly, Cheselden and John Hunter; the former, the most expert and successful operator of his day, in the European sense of the word, has left us a satisfactory declaration on this subject. Cheselden acknowledges that he seldom slept much the night previous to the day on which he had any important operation; but that, once engaged in operating, he was always firm, and his hand never trembled. John Hunter was not only a good operator himself, but he deduced from observation one of the greatest improvements in operative surgery. His discovery had all the elements of improvement that are possible in this branch of the profession.

An operation which had been founded upon erroneous views of the nature and relations of the parts affected—which had been always tedious and painful in performance—which, whether successful or not, entailed much subsequent suffering, which in its results was highly dangerous, and which was very commonly followed by the loss of the limb or life,—was replaced by one founded on more correct views of the disease, easy and simple in its execution, occupying not more than a very few minutes, and which, so far as regards the purpose for which it was instituted, and to which it should be restricted, is almost invariably successful. If it be performed under circumstances implying conditions *contrary to those on which Mr. Hunter's operation was founded*, very different results have no doubt taken place; but, when properly applied, his operation for aneurism is no doubt one of the greatest improvements in operative surgery.

John Hunter treats of operations in terms which show how low he rated that part of our duties. He speaks of them as humiliating examples of the imperfection of our science, and figures to himself an operator under the repulsive symbol of an armed savage. "No surgeon," said he, "should approach the "victim of his operation without a sacred dread and reluctance, "and should be *superior to that popular éclat generally attending* "*painful operations, often only because they are so*, or because "they are expensive to the patient"—p. 210. Abernethy, whose keen observation saw the difficult web which various sophistries, to use no harsher term, had thrown around the subject, was very characteristic in the manner in which he dashed it aside, and pointed to the salient source of error.

"Never perform an operation," he would say, "on another "person, which, under similar circumstances, you would not have "performed on yourself."

The truth is, that operations, to be performed properly, must be properly studied. They must be frequently performed on the dead, and afterwards carefully examined. There is a wide difference between neglecting a necessary study and making that the test of science which is the most emphatic proof of its imperfection. We have ourselves had no lack of experience in this branch of the profession, and have included not a few operations which are too commonly delivered over to men who are said to devote themselves to special objects. The result of our experience satisfies us in entertaining the views which the most distinguished men have held on this subject; whilst we are persuaded that few things have contributed more to impede the progress of science than the *abuse* of operations.

To return to the surgical appointments of the hospital.

The positions which had at first been left without any remuneration, become, by the machinery described, very lucrative; directly, by the fees paid by the pupils; and indirectly, in some cases, by keeping the surgeon constantly before the public. Any *prestige,* therefore, in obtaining these appointments, is of great value; but, if that do not really involve *professional excellence,* it is as plain as possible that the public may be very badly served, and an evil generated equally opposed to the interests of science and humanity. It is obvious that the only legitimate grounds of eligibility are moral and professional superiority, as determined by the test adopted at public schools and universities—namely, public competition. Now, what are the tests employed? Without meaning to insinuate that moral or professional eligibility is *wholly* disregarded—no system in these days will support that—still the eligibility depends on a qualification which few would beforehand have imagined. It is certainly something better than Mr. Macaulay's joke in relation to the proposed franchise to the Militia—namely, that the elector should be five feet two—but something not much more elevated; namely, that a bounty should have been paid to one of the hospital surgeons in the shape of an apprentice fee; thus making the holding one of the most responsible offices in the profession—a condition, which absolutely ignores relative eligibility of skill, steadiness, assiduity, and humanity; and which recognizes them only in such shape that the possession of office is practically made to depend on a point absolutely extrinsic to any one important requisition recognized by the public or the profession.

We need not insist on the tendency of this system to the protection of idleness and incapacity, or the injustice inseparable from it to the young gentlemen whose interests it is supposed to guard. One necessary consequence is obvious—namely, that the hospitals, instead of having to select from the general body of pupils, or from the more industrious or talented of them, is obliged to choose from a very small minority.

It is, in fact, just as if scholarships and fellowships at public schools and universities were conferred without any reference to the proofs which the candidates might have given of their talents or industry; but were distributed to those who had given a certain fee to a particular professor. Would any man in his senses doubt as to the influence of such a plan on the interests of classical literature or mathematical science? It seems to us impossible that men should really differ on that point, or hesitate to admit that, *mutatis mutandis*, whatever the science might be, so far as the cultivation of it could be influenced by system, the result must be alike prejudicial in all cases. We are, however, far from arriving at the end of the System by this general statement.

The public and the government, uninformed or unmindful of this "system," wish to consult authorities on professional matters. They not unnaturally look to those who hold public appointments, because these afford the *prestige* of extensive opportunity, which is supposed to imply, and under a fair system would ensure, skill and experience. Men are apt to look at a man's position, without stopping to inquire *how* it was obtained; and although position may cut both ways, and in particular instances "throw a cruel sunshine" over incapacity, still amongst gentlemen extreme cases are not to be expected; the rule is much more likely to be a respectable and protected mediocrity, which is just that tone which has rarely done anything to enlarge the boundaries of any kind of knowledge.

It happens, however, from the "system," and the position thus given to those who are supposed to profit by it, that the interests of the poor, and, in a considerable degree, those of the rich also, are, in a very large sense, confided to their care.

It thus follows that positions, in themselves highly desirable, and which enable men to exert considerable influence on the progress of a science, on the sound condition of which the physical comforts, and in no small degree the moral condition, of mankind depend, are occupied by men who have undergone none of those tests which public competition alone affords, and which the *summi honores* of almost every other profession either directly or indirectly imply.

So far for one mode in which the interests of the public are compromised; but there are many other channels. The government, ignoring the evils of this system, have placed the regulation of the surgical branch of the profession in the hands of a body of men whom, when we examine, we find to be no other than the apprentices we had recognized at the hospital, grown into the full bloom of a legislative body—whence again are chosen Presidents, Vice-Presidents, Examiners, &c., of the Royal College of Surgeons of London!

If, fatigued with this machinery, we walk to the Royal Medical and Chirurgical Society—a chartered body for the especial cultivation of science—we meet, as its name would imply, a number of our honoured brothers, the physicians; but here we find that, whether we observe Presidents or any other Officers, the influence exerted by the apprentice system continues; and that, in *almost* everything surgical, the *best possible* individual is an apprentice who has attained his first position without any public competition. Can any one be surprised that the published transactions of this society are not of a higher character. We hope and believe that the point of the wedge is already inserted, which will, at no distant period, rend asunder this system, which we shall not trust ourselves by attempting to characterize farther. But there are points in connection with the interests of science and of Abernethy which require yet to be noticed.

We need scarcely observe that it would be very desirable that the interests of science should be entrusted to those who had shown most assiduity or talent in the cultivation of them; that if operative surgery be really, as a whole, a series of facts exemplifying the defects of a science—that whilst every pains should be taken that what is necessary should be done thoroughly well—

all factitious inducement to multiply their number should be avoided, and especially any which tended to increase emolument commensurately with their multiplication.

That as operations (with some few exceptions) merely minister to effects, their real bearings on disease can only be estimated by knowing the *ultimate result;* and that, in order to this effect, returns of all operations should be kept, with full accounts of the cases; the addresses of the patients should also be taken, and such means as were obvious and practicable employed to obtain the *ultimate result* of the case.

Another point which should be attended to in hospitals, is an accurate notation and return of all cases whatever; so that we might obtain from statistical records whatever light they might be capable of affording in aid of the prosecution of a definite science. In this return, a full history, and *all* the phenomena of the case, which are known to have an influence on the Body, should be accurately noted, and in tabular forms convenient for reference.

The defects of the hospitals in this respect are too well known to require comment; and we think the profession indebted to Dr. Webster for the exertions he has made to draw attention to this subject. In no respect are the hospitals more defective than as regards the division of labour*. To supply the requisitions of a yet dawning science, there is too much confided to one surgeon; for, at present, the practical administration and the scientific investigation should be confided to the same hand. If more be entrusted to one man than can be performed without great labour, and the greater labour be voluntary, we shall have little chance of obtaining that full and accurate notation of facts which all cases furnish more or less the means of obtaining, and without which the evolution of the maximum of human ability is absolutely impossible. It seems to us also an imperative duty to avail ourselves of the experience afforded by the history of other sciences, in the cultivation of our own.

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* We are glad to see that there has at length arisen a desire, at least in a degree, to correct this evil.

All sciences have been in as bad a condition as medicine and surgery, or worse. All sciences have progressed immediately that they were investigated on a rational plan—a plan, which, simply stated, is little more than the bringing together *all the facts* that can be perceived to bear any relation to the inquiry, and reasoning on them according to *well-established* and necessary conditions. If this be the case, and this plan have never been applied to the investigation of medical science, we know not how those who are placed in positions which supply the necessary means can be excused; or how we can halt in condemning the system under which such a flagitious neglect of the claims of science and mankind is exemplified. It is true, when we arrive at the acmé of our convictions of the effects of such a system, our reflections remind us that such things are "permitted," and that ultimately they will work for good; that Man is not destined to interfere with the ultimate plan and designs of Providence, however he may be allowed to place his intellect under the direction of a responsible volition, and to discover the path to the temple of truth, only after having fruitlessly threaded the mazes of error.

CHAPTER XXIX.

"Quanto quisque sibi plura negaverit
Ab Dis plura feret."

We believe that there is no greater fallacy than that which supposes that private advantage can be promoted at the expense of the public good. We are very well disposed to believe that selfish people are the very worst caterers for the real interests of the idol they worship. The more we consider the Hospital system, the more reason shall we find to distrust it; and we by no means exclude that very point wherein it is supposed to be most successful—namely, in securing the pecuniary advantage of those whose interests it is supposed to serve.

Of the apprentices, we shall say little more than to express our belief that many of them have lived to obtain the conviction that they would have done much better had they not been fed by hopes that were never realized. All apprentices cannot, of course, be surgeons. Again, if, in the course of a century, a solitary instance or two should occur of the success of an unapprenticed candidate, they not unnaturally feel it as an injustice in thus being deprived of that, the especial eligibility to which was a plea for the exaction of a large apprentice fee. But to the surgeons themselves, it seems to us that the system is far from realizing the benefits that its manifold evils are supposed to secure. The adage that "curses, like chickens, come home to roost," is far from inapplicable. After all, many of the hospital surgeons are little known; and the public inference with regard to men invested with such splendid opportunities of distinguishing themselves, is not very flattering. Mr. Abernethy, so far from benefiting from the "System," appears to us to have suffered from it in every way.

His talents, both natural and acquired, would have given him every thing to hope and nothing to fear from the severest competition; whilst the positive effects of the system were such as to deprive him of what was justly his due, and to embitter a retirement which in the barest justice should have been graced by every thing that could add to his peace, his honour, or his happiness, from the Institution whose character he had exalted and maintained, and whose school he had founded.

But let us look at the facts. The system which pronounces that there shall be three surgeons to attend to some 500 or 600 patients *(for the purposes of science*—the next thing to an impossibility), kept Abernethy twenty-eight years an assistant surgeon. During this time he was filling the hospital with students, to the amount of sums varying from £2,000 to £3,000 a year, of which, in the said twenty-eight years, he never received one farthing.

He saw, from time to time, many men, of whose capacities we know he had the highest opinion, shut out from the hospital by the mere circumstance of their not having been apprentices; and two of these were the late Professor Macartney, of Dublin, and the present distinguished Professor of Comparative Anatomy, Professor Owen. And here we must pause to record one of our numerous obligations to the perceptivity and justice of Abernethy. We have formerly observed that, at the very commencement of life, he had been accustomed to inculcate the importance of studying comparative anatomy and physiology, in order to obtain clear views of the functions of Man; but all arrangements made with this view, from the time of Mr. Hunter onwards, though varying in degree, were still inefficient. It was next to an impossibility to combine an availing pursuit of a science which involves an inquiry into the structure and functions of the whole animal kingdom, with the daily exigencies of an anxious profession.

When Mr. Owen had completed his education, his thoughts were directed to a Surgeoncy in the navy, as combining a professional appointment with the possibility of pursuing, with increased opportunities of observation, his favorite study. Fortunately for science, he went to Abernethy, who requested him to pause. He said, " You know the Hospital will not have any but apprentices. Macartney left on that account. Stay," said he, " and allow me to think the matter over." This resulted in his proposing to the Council of the College of Surgeons that there should be a *permanent* Professor of Comparative Anatomy, and that the appointment should be given to Mr. Owen.

This is among the many proofs of Abernethy's perception of character. Mr. Owen had dissected for lecture; and Abernethy saw, or thought he saw, a peculiar aptitude for more general and enlarged anatomical investigation. The whole world now knows how nobly the Professor has justified the hopes of his talented master. It would be out of place for us to attempt a compliment to a man so distinguished in a science, wherein the varied pursuits of a practical profession allow us to be mere amateurs; neither do we wish to forget other gentlemen who distinguish themselves in this branch of science; but we believe that most competent judges allow that the celebrated Cuvier has not left any one more fitted to appreciate his excellence, or who has more contributed to extend that science of which the Baron was so distinguished a leader, than Professor Owen.

There is one incident, however, in the Professor's labours which, for our own purposes, we must relate; because we shall have to refer to it in our humble exhortation to the public and the profession to believe in the practicability of raising Medicine and Surgery into a definite science. The incident shows what may be done by that mode of investigation which is the still delayed desideratum in medicine and surgery—namely, the *most comprehensive* record of facts, and the study of their *minutest relations*. Professor Cuvier was the first to impress, in a special manner, that those beautiful relations in the structure of animals, so many of which are even popularly familiar, extended throughout the animal; so that if any one part, however apparently subordinate, were changed, so accurate were the adaptations in Nature, that all parts underwent some corresponding modification; so that diversity of structure in parts, more or less affected the whole.

The beautiful result of all this is, that if these relations be once thoroughly mastered, then any one part necessarily suggests, in general terms, the nature of the animal to whom it belonged. Few instances, however, so remarkable as the one we are about to mention, could have been anticipated.

A seafaring man brought a piece of bone, about three or four inches in length, as he said, from New Zealand, and offered it for sale at one or two museums; amongst others, at the College of Surgeons. We shall not here detain the reader by telling all that happened. These things are often brought with intent to deceive, and with false allegations. Most of those to whom the bone was submitted, dismissed it as worthless, or manifested their incredulity. Amogst other guesses, some rather eminent persons jocosely hinted that they had seen bones very like it at the London Tavern; regarding it, in fact, as part of an old marrow-bone, to which it bore, on a superficial view, some resemblance. At length it was brought to Professor Owen, who, having looked at it carefully, thought it right to investigate it more narrowly; and after much consideration, he ventured to pronounce his opinion. This opinion, from almost anybody else, would have been perhaps only laughed at; for, in the first place, he said that the bone (big enough, as we have seen, to suggest that it had belonged to an ox) had belonged to a bird. But before people had had time to recover from their surprise or other sensation created by this announcement, they were greeted by another assertion, yet more startling—namely, that it had been a bird without wings.

Now, we happen to know a good deal of this story; and that the incredulity and doubt with which the opinion was received were too great, for a time, even for the authority of Professor Owen to dispel. But mark the truthfulness of a real science; contemplate the exquisite beauty and accuracy of relation in nature! By and by, a whole skeleton was brought over to this country, when the opinion of the Professor was converted into an established fact. Nor was this all; there was this appropriate symbol to perpetuate the triumph: that which had appeared as the most startling feature of what had been scarcely better received than as a wild conjecture, was so accurate in fact, as to form the most appropriate name to the animal thus discovered*.

It would be unjust to others to attribute Professor Owen's appointment exclusively to Abernethy: that, the state of things did not place within his single power; but his penetration was the first to suggest, and his weight most potential in securing, an appointment which various circumstances, besides the merits of the individual, bring up in high relief, as the best ever made by the London College of Surgeons.

To return to the Hospital System, as affecting Abernethy. He continued to lecture, and the emoluments arising thence he of course enjoyed. Until 1815, the whole of the hospital fees had been taken by the surgeons in chief. These fees, in twenty-eight years (allowing a reasonable deduction for those pupils who went to the school independently of the inducement offered by the most attractive lecturer ever known), must have amounted to an enormous sum. Having founded the school, he became surgeon at about fifty years of age; and then retired at sixty-two. On retiring, unpleasant discussions arose, which, with others long antecedent, rendered his concluding associations with the hospital scarcely more agreeable than they had been at the College of Surgeons.

The whole of Abernethy's closing career gave him no reason to rejoice at the Hospital System. The circumstances, though they convey a lesson in the History of the Lives of Men of Genius, were, abstractedly, extremely unimportant. They show that Abernethy, in his retiring hours, whilst his reputation had become European, and Transatlantic†—whilst hundreds were benefiting their fellow creatures, more or less, according to their talents and opportunities, in every part of the world—seems to have been surrounded by men who, so far as we can see, were little disposed to grace his retirement either with much sympathy, or even with reasonably generous appreciation of all that he had done, either for Science in general, or the Hospital in particular.

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* It was accordingly named the Apteryx, or wingless, from the Greek Alpha and Pterux.

† We have derived great pleasure from our correspondence, during some years, with Professor Ethelbert Dudley, of Lexington, Kentucky, and from the evidence it affords of Abernethy's principles having been recognized, and practised with great success, by one of the most distinguished surgeons and successful operators in the Western World. Professor E. Dudley, himself a distinguished surgeon and lecturer, and a man who unites with an extremely clear and viva-

Instead of considering how they could best do honour to the waning powers of one who had not only raised the reputation of St. Bartholomew's Hospital to a point it had never before attained, who had founded a school there, constituting the largest single Hospital Class in London, and who was leaving the inheritance of a rich annual harvest to his successors,—the time was occupied in discussing whether he could resign the surgeoncy without resigning the lectureship; whether, on paying a hundred guineas, which there seemed no difficulty in receiving, he could become a Governor whilst still an officer; and then, whether his being a Lecturer without retaining the surgeoncy did not so constitute him. These, and similar questions scarcely more important, were the source of considerable annoyance.

In former editions, we were obliged to discuss some of these matters more at large than is now necessary; because, amongst the individuals associated in the transactions of the period, there was one to whom Mr. Abernethy had been of especial service; but in regard to whom he had been much misrepresented. Further, this had taken place in our own hearing, in whose recollection all the facts were perfectly fresh, but who were, at that time,

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cious perceptivity, a most untiring zeal in his profession, is the nephew of the celebrated B. Dudley, whose fame extends through the great Mississippi Valley. This gentleman, now advanced in years, was an early pupil of Abernethy, of whom he is a great admirer. He is a remarkably successful operator, and, during his more active period, was sometimes sent for several hundred miles. He is said to have performed lithotomy 200 times, with the loss of only six cases. His unusual success in operations he attributes not so much to any peculiar dexterity as to the manner in which he conducts the preparatory and subsequent portions of the Constitutional treatment of his cases. He seems also to have practised some other of Abernethy's habits: the most careful consideration of the pecuniary circumstances of his patients, interspersed with not a few examples of almost unexampled generosity.

without the documents which are now in our possession. We accordingly sought to obtain whatever documents there were from the source most likely to test the correctness of our recollection; when a note was written which, as we now learn, quite unintentionally conveyed the idea, or at least was susceptible of the construction, that a disinclination to make any communication on the subject proceeded from a desire to withhold something unfavourable to Mr. Abernethy. This determined us on discussing the matter, so far as was necessary to rebut such interpretation. And it was fortunate we did so; for it very soon appeared, not only that such an impression had been produced, but that "gossip," with its usual aptitude for invention, had soon supplied the myth thus supposed to have been charitably withheld.

It was not very long after the publication of these Memoirs, that we learned, in a conversation with a highly distinguished member of the profession, that he had been led to entertain the impression to which we have alluded. Here we had, of course, an opportunity of correcting the error; but it obviously became a subject of very serious consideration, what must be done in dealing with this matter, and other matters arising out of it, in a subsequent edition. To treat the affair seriously, would have involved a reference to documents in our possession which, though highly honorable to Mr. Abernethy, would have been of no general interest, whilst they would have involved details disagreeable to several persons. We therefore, after much consideration, resolved on endeavouring to see whether it was not possible to quash a tedious and painful discussion, and at the same time to obtain, of course, all that was necessary to the memory of Mr. Abernethy.

The following letter, and the reply, will, we think, sufficiently develop the very difficult and disagreeable position in which we were placed; our sole object being, so far as it was possible, to avoid repeating or enlarging a discussion which we had learned would have given pain to certain parties. The concluding paragraph has been omitted, as being unnecessary to the point more immediately under discussion.

" 3, The Court Yard, Albany,
" July 17th, 1856.

" Sir,

" For reasons which may be gathered from this note, I think " it proper to inform you that I am preparing another edition of " the Memoirs of Abernethy. Impressions have been conveyed " to certain persons, that the reasons on which you grounded your " disinclination to make any communication in relation to your " differences with Abernethy, were the desire you professed to with- " hold something which involved imputations unfavourable to him. " Further, a sort of Body has been given to these vague impres- " sions by inferences which the documentary and other evidence " at my disposal enable me to disprove. In one quarter, the " circumstances are so strongly suggestive as to the sources " whence the erroneous impressions were derived, that it is im- " possible to leave that portion of the Memoirs which treats of " your differences with Abernethy as it at present stands, without " the risk of injustice. It is regarded as necessary that you " should either recognize or ignore the inferences which (whether " correctly or not I will not presume in this place to determine) " have certainly been formed on your supposed authority. The " justice of such a course is sufficiently obvious. I need scarcely " say, it is immaterial to me what course is taken. If I am " obliged to enter into the discussion of the subject, I shall take " the opportunity of defending myself from the remarks that " have been made upon me, and of showing what I did say, as " well as what I might have said. These remarks are less excus- " able from it being known to me that a letter of mine to a third " party was by my express permission read to you, in which was " stated my willingness to alter or modify any passage which " might have offended your feelings, provided only that such " alteration involved no injustice to Mr. Abernethy. The (as I " think) ill-advised rejection of the offer, coupled with the intima- " tion, long after, which was given to Mr. Longman by a friend " of yours, that certain papers would be forthcoming, provided " only that certain passages relating to Mr. Stanley were sup-

" pressed, will involve a discussion in which I shall now be very " unreserved; but which, I fear, will be scarcely less disagreeable " to you than painful to myself. If you ignore the imputations " to which I have referred, it seems to me that the whole discus-" sion may be quashed by your simply writing me a note, in which " you state as the reason for your not making any communication " to me your dislike to revive the recollection of differences with " one whose memory you will always regard with respect, grati-" tude, and affection, or whatever other terms your feelings may " justify, or the claims of Mr. Abernethy require.

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" I am, Sir,
" Your obedient servant,
" G. Macilwain."

The following is Mr. Stanley's reply:

" Brook Street, July 18th.

" Sir,

" Upon the subject of your communication to me, I can only " say, that I have no information to give; for I am not in posses-" sion of any document relating to it; and so many years have " elapsed since the occurrences to which you refer, that I could " not trust my memory for the accuracy of any statement, if I " were disposed to make it. You will therefore perceive that there " exists no foundation for the supposition that 'I desire to " 'withhold something which involved imputations unfavourable " 'to Mr. Abernethy,' or that any other feelings than those " of the utmost respect for the memory of Mr. Abernethy have " existed in my mind.

" I am, sir,
" Your obedient servant,
" Edward Stanley."

" G. Macilwain, Esq."

We here conclude this subject.

A somewhat amusing illustration of one feature of the hospital system occurred about this time. Sir Astley Cooper had, without the smallest intention to give offence, made some observation on the somewhat too free use of Mercury at that period in the Borough Hospitals. His observations having been misunderstood or misrepresented, he took occasion to remove any idea of intentional offence, by addressing the class. Among other things, he is reported to have said: "Why, gentlemen, was it likely "that I should say any thing unkind towards these gentlemen? "Is not Mr. Green my godson, Mr. Tyrrell my nephew, Mr. "Travers my apprentice" (the three surgeons of St. Thomas's Hospital), "Mr. Key my nephew, Mr. Cooper my nephew?" (surgeons of Guy's)*.

This was very *naïve*, and is an illustration of the value of evidence in proof of facts having no necessary connection with those it was intended to establish.

It is difficult to conceive any one more disinterested than Mr. Abernethy had been in relation to the surgeoncy of the hospital, from the moment at which he was appointed to the hour of his resignation. Although he had waited twenty-eight years as assistant, and not participated in one farthing of the large sums accruing from his reputation in hospital pupil fees—although, too, he had a large family,—yet, so far was he from wishing to indemnify himself for this long exclusion from office by a lengthened tenure of it, that he at once announced his opinion as to the expediency of earlier resignations of the surgeoncies, and his intention of acting on it when he should have attained his sixtieth year. His reasons were liberal and judicious. Amongst others, he said that he had "often witnessed the evils resulting "from men retaining the office of surgeons to hospitals when "the infirmities of age prevented them from performing their "duties in an efficient manner. That, at sixty, he thought they "should resign in favour of the juniors," &c.; thus contemplating a tenure of only ten years. Again, he who had founded a school from such small beginnings as could be accommodated in a private house in an obscure neighbourhood (Bartholomew Close), taken for that purpose—who had so increased it, that a theatre was built within the hospital—this again pulled down and rebuilt of enlarged dimensions to receive his increasing audiences—having, too, some time previously made over his museum to the hospital, in trust for the use of the school,—required that his only son (should he *prove competent in the opinion of the medical officers*) should in due time—Do what? Succeed him? No; but be admitted to a *share* in the lectures.

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* *See* Lancet, 1828.

Indeed, Mr. Abernethy's closing career at the hospital gave him no great reason to rejoice at the "hospital system." Men, who could see nothing in leaving very much more important situations to an indefinite succession of apprentices, cavilled at a prospective lectureship for his only son; whilst his lectures were delivered over to gentlemen—one of whom had, from an early period, ridiculed, as he said, the opinions which he taught as—and which we now know to have been—John Hunter's; and another, with whom there had been of late several not very pleasing associations.

This was necessarily a result of the "hospital system;" a system that gave a still more melancholy and fatal close to the labours of John Hunter, whose death took place suddenly in the Board-room of St. George's Hospital, whilst resisting an interference with a privilege which his love of science rendered valuable to him, and which it was for the interests of science that he should enjoy; but, mournful as these results are, and many others that might be added, still, if we found that the system worked well for science, we might rest satisfied; but is it so? What advances have the hospital surgeons of London, *under the apprentice system*, made in the science of surgery? Let those answer the question who are desirous of maintaining this system. For our own parts, the retrospect seems to show "the system" in a more striking manner than any thing we have yet stated. John Hunter, that *primus inter omnes*, was no hospital apprentice; he migrated from St. Bartholomew's, where the rule was too exclusive to give him a chance, to St. George's, where he obtained admittance; St. Bartholomew's preserved "the system," and lost Hunter.

Abernethy was an apprentice, truly; but all those glorious labours which shed such a lustre on his profession, and such a benefit on mankind, were completed long before he became surgeon to St. Bartholomew's Hospital; and it is material to repeat that at that time the assistant surgeons, with the exceptions already stated, had nothing to do. In casting our eyes over the retrospect of years, one honoured name attracts our notice, in connection with a real advance in the knowledge of the functions of nerves. We allude to Sir Charles Bell. But here again "the system" is unfortunate; for Sir Charles was never a hospital apprentice at all, and only succeeded to a post in a London hospital after an open canvass in an institution in which the narrow portal of the apprentice system is unrecognized.

We might have traced the effects of the apprentice system into the more covert sites of its operations, as exemplified in the abortive or mischievous legislation observed at different times in the College of Surgeons of London; or have extended the catalogue we formerly exposed as taking place in the Royal Med. and Chir. Society up to the influence—proh pudor!—that it is allowed to exert in the Councils of the Royal Society; but our so doing here would have led us into discussions which are irrelevant or unnecessary to our present objects. In the meantime, it is useful to remark that there are two sides to all questions. If, in our corporate bodies, we see the prurient appetencies of trade usurping the place of the lofty aspirations of science,—if we see this carried to the extent of men allowing themselves to receive money without rendering any intelligible account of its amount,—let us not forget that there is a Public—aye, and a Profession too—which calmly allows such things.

Let us also reflect on those numerous instances, in human affairs, of things being only accomplished when there is a real necessity for them; and, again, whether that necessity for a higher and purer administration of corporate privileges and scientific distinctions may not alone reside in a higher and purer moral standard on the part of the public and the profession. Those who, in a worldly sense, suffer from the system, have at least the consolation that they are not obliged to participate in the administration of that which they disapprove; and that the losses they so sustain are perhaps necessary tests of their having achieved proper motives. No better proof of the sincerity and earnestness of our love of science can be afforded us, than a patient and thoughtful cultivation of it, independently of patronage, position, or other auxiliaries, which too often mask from us the true objects of research, sully the purity of mind by mixtures of questionable motive, or mislead us from the temple of truth to the altar of a fugitive and fallacious ambition. There are indeed signs of a "*Delenda est Carthago.*" As we have said, the point of the wedge is inserted, and a very little extension of public information will at no distant period drive it home.

In the meantime, Medical Science, instead of being in a position to receive every quackery as a means of demonstrating the superior beauty of truth, by placing it in contrast with error, is obliged to regard any absurdity, however gross, as one of the hydra-headed fallacies through which we are to evolve what is true, only by the circuitous plan of exhausting the resources of hypothesis and conjecture: whilst sweeping epidemics, which, wholesomely regarded, should be looked on reverently as besoms of destruction, are hailed by the observant as melancholy, but necessary, impulses, to drive us to the adoption of measures, to which our capital of common sense is not sufficient to induce us to listen.

Neither are the old hospitals the only parts of a defective system. There is no hospital in London that, even yet, has any country establishment for convalescents; whilst of two of those more recently established, one is built over a church-yard; and the other, intended only for the relief of decarbonizing organs, is placed in the immediate neighbourhood of the most smoky metropolis in Europe. Both, therefore, instead of standing out as the most distinguished illustrations of the laws of sanitary and physiological science, being, on the contrary, emphatic examples of their violation.

We are unwilling to conclude this chapter without observing that, notwithstanding the coldness and discussions which threw somewhat of melancholy and shade over Abernethy's retiring days, thus presenting an unwelcome contrast with the more palmy periods of his career—a contrast from which it might have been hoped his conscientious retirement might have spared him,—we yet see how appropriate a preparation it might have been for a transition from the exciting, and adulatory, atmosphere which surrounds a popular and scientific teacher, as compared with the calmness and peace of a life in the country. He was now no more to enter the Hospital Square, where we have so often seen him mobbed, as it were, by the crowding and expectant pupils; no more to be daily addressing audiences who never seemed to tire even with repetitions of that with which many were already familiar; nor any more to see, as occasional visitors, men grown grey in the successful practice of his early lessons, bringing their sons to the same school, and both listening with equal pleasure. There is no doubt that, contrasted with all this, retirement was a great, though now probably a welcome, change. Eminent men unintentionally exert an influence which is not without its evils; and we shall see that of this he was fully aware. Assentation is too much the order of the day. The multitude appear to agree. The few who differ, are apt to be cautious or reserved. If a man is too sensible to be fed with such garbage as direct flattery, there are always tricksters or tacticians, who have a thousand ways of paying homage without detection.

Then, again, those who really admire a man, and are honest,—keep aloof, and shrink from an association with those whom they know, or believe, to be parasites. It thus happens that there are men to whom so few venture to be honest, that the world may present little better than a practical lie. It is a mercy then, when a man's sun is setting, that he be blessed with a little twilight of truth.

There are, in the moral and intellectual constitution, as well as in the physical endowments of Man, beneficent powers of adaptation, which let us gently down to contrasts, which, too sudden, might be painful or destructive.

There is, however, this difference—the external senses have intrinsic powers of adaptation so ready, and perfect, as scarcely to be taken by surprise by any natural transition. The moral and intellectual powers do not appear to possess this electric activity; but require slower gradations of impression, which, by some law in the progress of human affairs, are (as the rule) mercifully supplied.

In his own lessons, whenever he met with any *apparent* imperfection, and wished to impress its *real* beauty of adaptation, Abernethy was very fond of what he termed his argumentum ex absurdo. He would suppose various other arrangements, and point out in succession their unfitness for the purposes required. Tried in the same manner, we can see nothing better than that which really happened.

If Abernethy met with coldness where he expected warmth—and dispute and discussion where he might have calculated on grateful concession,—how well-fitted must have been that reverence and affection which longingly awaited his retirement at home. If the greatest worldly success, in that occupation in which he had always felt most pleasure, was still not without its dark lights—shadowing forth what the world really is,—what could he have had better to concentrate his views on those substantial sources of comfort, of which he had long believed and estimated the value, and on which he was contented to repose. It had always been a favourite expression of his, when in any doubt or difficulty: "Well, I will consult my pillow, and we shall see." We believe that pillow seldom flattered.

CHAPTER XXX.

HIS RELIGION.

"Philosophy directs us to bear evils with patience and fortitude, because they are inevitable; but Christianity gives us consolation under sufferings, by assuring us that they are but the discipline of a Parent who loveth while he chastiseth, and that they are but for a moment, when compared with eternity. The Christian's Hope has made him whom it has supported rejoice under the greatest sufferings that mortality could endure; yet Hope is but the offspring of faith, and therefore it was necessary to make faith the foundation of the structure of the Christian Religion, and to assign and affix to it peculiar privileges and rewards."
MR. ABERNETHY*.

WHOEVER reflects on the influence produced on the mind by research in Science, will, we think, arrive at a very important conclusion.

It is true that, at the commencement, numerous worldly motives tend to place most prominently before us the temporal advantages of scientific Inquiry. There are distinctions of wealth, rank, position, which not unfrequently await its successful cultivation. Then there are the multiform applications of science in extending the enjoyments, in ministering to the wants, and, still better, relieving the calamities of mankind; but when we have arrived at this, surely the acmé of its *utilitarian* allurements, we find there are still higher motives engendered—that science has a still richer harvest to encourage its onward cultivation. Nor is it too much to say, that, if cultivated aright, the fruits may be more surely garnered than any of those to which we have previously referred. The harvest we mean consists of those moralizing influences which, however neglected, are never separable from the study of Nature; which, however ordinary the impulses with which the inquiry may have commenced, slowly overlay it with motives and feelings which lead us to investigate Nature for the sake of truth alone. And here, we think, first dawns upon us the conclusion to which we have alluded: viz. that the highest attractions of science are to be found in what we venture to term its "Religion."

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* From his Essay on Mind, and his MSS.

However much the influences first mentioned tend to place the more lofty suggestions of science in temporary abeyance, there always comes a time when the sincere inquirer begins to feel a double current of thought. In the one, the thoughts are open, aspiring—ambitious, it may be—public, and directed only to the laws and phenomena of Nature; in the other, they are calm, deep, humble, silent, and *will* turn to the Supreme Cause. The former may foster his ambition, animate his research, sustain his industry. The latter carry him beyond those influences, and supply ~~supplies~~ something which they cannot give. In loving truth for its own sake, he learns by degrees to lean little on the worldly appreciation of labour—convinced that whatever is true, will one day find its own way, in the time best fitted for it. We cannot help thinking that it is the force of this double current of thought by which that climax has been reached by some of the greatest minds; which has exemplified the coincidence of the utmost range of human knowledge with the most profound humility; thus rendering the highest aspirations of science subservient to the cultivation of a principle; inseparable, we suppose, from all Religion; but certainly one of the most distinguishing characteristics of Christianity.

An idea, however, has arisen in some minds, that the pursuit of science has a tendency to make men sceptical in Religion. This we believe to be not only a demonstrable, but a dangerous error—demonstrable, as remarkably opposed to the evidences of fact and observation; and dangerous, as withdrawing the minds of many from the study of science, who would be perhaps especially fitted to estimate its advantages and enjoy its pleasures.

History, who from her ample store of testimony has so often repealed injustice and defeated error, is no where more conclusive than on the question before us. The study of Nature not only has no tendency to induce a state of mind unfavorable to the reception of the truths of Religion, but just the contrary; for the proofs of a humble and sincere reliance on the promises of the one, have been infinitely most striking in those who have proved themselves the most successful cultivators of the other.

The philosopher, regarding the universe as the dwelling of the Supreme, sees in the laws of nature, and in the powers through which he is permitted in a degree to interpret them, only another revelation—a Divine recognition of his high relations and destiny; and grasps in one comprehensive idea the Word and the Works, as an integral communication—one extended privilege to Man. He does not indeed confound the evidences on which philosophical and religious truths respectively repose. He knows that they rest on different *kinds* of testimony, which he neither strives to identify, nor misapply. He no more expects to deduce the generalizations of science from the Scriptures, than he does the commands of the Deity from the facts of the natural world. Philosophy and Religion, however, are constantly impressing similar facts. In science, we learn—and no doubt the deepest learn it best—that "there are more things in heaven and earth than are dreamt "of in our philosophy." Religion tells us there are many things "past man's understanding." Religion and science teach us alike that any inquiry into the positive and ultimate nature of anything which exists, is entirely beyond our faculties; and respectively impress on us the conviction, that our proper business is to search out the phenomena and laws of the one, and to obey the Commandments of the other.

Philosophy is daily teaching us how little we know, as compared with that which is unknown. Religion informs us that, at present, we see "through a glass darkly." Yet, at the same time, both concur in encouraging us to believe that everything that is really required of us, everything that is good and useful to us both here and hereafter, are alike open to human capacity. The pursuit of science, no doubt, establishes requisitions which are essential to the proper study of it. A mind undisciplined by any rule; a mind taking only a conjectural view of nature; a mind allowing fancy or imagination to usurp the place of intellectual power; a condition which ignores the guidance of patience, circumspection, and industry, and which seeks the explanation of the impressions made on the senses by ingenious hypotheses made to fit them; or which sees no order or intelligibility in anything which it does not at once comprehend; that these and many other states of mind *may* tend to confound the understanding, and replace anything rational or profitable by anything else, is *possible* enough. But is it not equally true of Religion? Experience has abundantly shown us the result of Man trying to fit the mysteries of Religion to the measure of intelligibility set up by the human intellect. There surely is no subject on which men have become more lamentably bewildered. This, however, is merely one of the too common examples of abuse of our faculties; and that such men may become sceptical, whether pursuing Science or any subject whatever, is probable. It is, in truth, "Science falsely so called," and has no more relation to the legitimate study of Nature, than the most orderly formula of the mathematician has to the wildest conjecture.

But that research in science, legitimately conducted, has any tendency to produce what is usually intended by the term scepticism, is not only improbable;—it is directly contradicted by the facts of experience. So numerous are the examples of the contrary, to which we here add the name of Abernethy, that it is difficult to select, so as not to leave the evidence unjustifiably bald on the one hand; or to render it superfluous even to tediousness on the other. That which confers, however, the greatest interest on this part of the subject, is not so much the *mass* of testimony, not so much the *crowd* of witnesses, as the peculiar, yet varied, character of the august assemblage. It is extremely significant to observe, that whilst we find amongst the most earnest advocates of the paramount importance of Revealed Truth, the names of the most successful students of the Truths of Science,—so, on the other hand, no persons have laboured to impress us with the important uses of the facts in nature with more zeal and success than distinguished Divines. Amongst the many scientific men who have exemplified the purifying tendencies of scientific pursuits in promoting their reverence for Revealed Religion, it will suffice to mention such names as Boyle, Bacon, Kepler, Newton, Locke. The latter too reminds us that the medical profession has contributed no small number of witnesses; of whom, Boerrhave, Linnæus, Sloane, and Haller, are a few of the more illustrious examples. All the foregoing are men who have explored one or more of the ample fields of Nature; some of them, extending their views beyond the planet we inhabit, into the whole visible universe, have come back, showing us how to understand the necessity, and estimate the value, of Revealed Truth; converting, it may be, in many instances, Belief (so called) into a positive Faith; and a passive assent into an earnest and clear conviction.

But, as we have said, Divines have not been slow in contributing the weight of their testimony to the value of natural evidence, and the acceptable assistance afforded by a contemplation of the laws and the mysteries of Nature. So abundant indeed are these mysteries, that there is not a path of our progress by day, nor a waking thought by night, that does not at times present some of them to our reflection. Mysteries in operation so clear, that our very senses take cognizance of them; so orderly, that when we are allowed to discover the law which regulates them, we are at a loss which most to admire, the power, the number, or the simplicity of its manifestations; and yet which, as to their intrinsic nature, are so recondite as to be entirely beyond our researches; leaving us, in fact, no faculty which can deal with them, but faith alone. Divines have shown the value they attach to all such facts, by the admirable application they have made of them in aiding the cultivation of Religion—sometimes by teaching the necessity and reasonableness of faith in the mysteries of Religion; at others, in impressing the nature and attributes of the Supreme.

It would be easy to produce a longer roll of such men; but most readers are acquainted with such names as Cudworth, Butler, Sturm, Derham, Paley, Crombie, who have, in one or other sense, exemplified the importance of natural knowledge, and the interest they took in its cultivation. In every phase of the investigation, we meet with fresh examples of the union of Religion with Science. Paschal and St. Pierre are eminent illustrations. Paschal was a Divine, and an eminent mathematician: mankind is surely under obligations to him for his "Lettres Provinciales." These extraordinary compositions must have operated with uncommon force against the sophistries of the Jesuits; and, considering the nature of the subject, it could have been no ordinary work that could have induced Voltaire to say that he had never read anything more humorous than the earlier letters, or more sublime than the later. St. Pierre*, too, should not be passed without mention. His book is, in some points of view, one of the most interesting works ever written: occasionally fanciful or enthusiastic, it is a most unusually rich collection of facts and observations. How excellently adapted it is to encourage observation of natural phenomena! How just and philanthropic—how circumspect and comprehensive his observations in Nature! and how excellent and free from cant the paramount importance he impresses of Religion as a principle, and of Christianity as the perfect supply of all that is necessary to us in time or in eternity. Yet St. Pierre was a soldier; and it is to our present purpose that he was a scientific man, and an engineer. Neither should we pass unnoticed the numerous associations of pastoral care with the observation of nature, so pleasingly exemplified in White of Selburne, and Gilpin of the New Forest—men whose books we count now rather by generations than editions, and which suggest to our imagination the additional gratification which such men must have derived to their favourite pursuits, in the continued sanction afforded by Scripture. We would reverently point to the site first chosen as the abode of purity and innocence; and the numerous illustrations from nature contained in the Sacred Volume; whether in enforcing general rules, or a special command—impressing a particular principle, or illustrating a recondite mystery,—and especially that which is a *remarkable and necessary combination* of mystery with faith. For whilst it is, as well as other mysteries, beyond our comprehension, it commands so entire a faith in its reality, as to be, in some form or other, instinctive and universal*.

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* Études de la Nature.

Mr. Abernethy, it has been stated in former editions, was, as regards his religious tenets, a member of the Church of England: and it would have been gratifying to have included some of those sentiments on religious and moral matters which we now record; but, although some of these documents had been open to our inspection before the completion of the second edition, they were not so entirely at our disposal as Miss Abernethy has subsequently placed them. Of these documents, those which relate to religious and moral subjects consist, first, of a small book on the Mind, which Abernethy published a great many years ago, anonymously; and certain reflections, found amongst the very few MSS. which he had preserved. Amongst these papers, there are two which are in the form of sermons; and, although they are all somewhat fragmentary, they are in several points of view more or less interesting.

As it appears to be an abuse of the proper business of biography to publish every thing that an eminent man says or does, we shall endeavour to make such selection as shall fall within its legitimate objects—viz. as establishing some fact of importance, as illustrating the tone and character of the man, or as placing some conclusion which had been drawn more or less from general observation, on the more secure basis of the sentiments he has himself recorded.

EXTRACTS.

There is "more moral certainty in the greater number of "instances of those things which we believe from the deduction "of reason, than of those we believe from the action of the "senses."

Yet he would warn the students of science "from being "proud of their acquisitions; and against not believing any

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* St. Paul, I Cor. xv, v. 36—37.

" thing but what they learn from the deductions of their reason, " lest they *become most ignorant of that of which they are most* " *assured.*"

"Man at this period of the world is still ignorant of the " nature of surrounding bodies ; his information must be " limited as his perceptions are limited, and this should pro" duce humility, the proper frame of mind for " Christians."

After saying that we have no means of forming any idea of the nature of matter, but from the impressions we receive from it, those of figure, divisibility, gravity, and disposition to move when impelled, to continue in motion unless retarded, &c. &c.—in allusion to a well-known theory, he adds : "But some have doubted " whether we could be sure even of those properties of matter " of which we felt most confident the existence were such as we " conceived them to be. Certainly," he says, " we know nothing " of what matter really is ; we only know certain properties, " without being at all acquainted with the substratum or subject, " as a logician would say, which supports these properties. " Yet," he says, " when we consider the ideas derived from ex" ternal objects, we *cannot but admire their correctness and* " *suitability to our present wants and state of existence.*"

" If we are ignorant of the nature of the most common " object of matter, as we call it, how can we obtain any know" ledge of what we call Spirit?" He thinks that it is only from a knowledge of ourselves that we can derive any ideas on the subject.

" When we examine our bodies, we see an assemblage

" of organs formed of what we call matter, visible to the " eye and cognizable to the touch; but, when we examine our " minds, we feel that there is something sensitive and intelligible " which inhabit our bodies." "We naturally believe in the " existence of a Supreme First Cause. We feel our own free agency. " We distinguish right and wrong. We feel as if we were " responsible for our conduct, and the belief in the existence of " a *future state seems indigenous to the mind of man.*" "We " are conscious of our existence; we remember our sensations; " we compare them, judge of them, and Will and act in consequence " of such judgment." He thinks if we can form any notion of the actions of a Spirit, it must be from reflections on such phenomena, and not from any hypothetical definitions of Matter and Spirit.

Again, after insisting on the limitation of our powers, he says, "From them we may conceive of God, that He approves " what is right, and condemns what is wrong; and that he may " approve of our conduct when we act right or wrong, according " to our own ideas of rectitude or error. We cannot conceive " that God would have given us the power of judging without deciding on the rectitude or error of our conduct in conformity to such power or judgment. This is the sense in which " I understand the Scriptures—that God created man in His " own image."

HIS TENDENCY TO REASON BY ANALOGY.

" As the Mind takes cognizance of what is passing in the " body, and in those which surround it and directs its notions " and operations in regard to them, so we may conceive of that " Great Spirit, the Soul of the universe, that He perceives and " governs all its parts. That Creator, Supporter, and Governor " of the universe, whom we are taught to address, not only as " such, but by the more endearing appellation of the Father of " our Spirits."

In his little book on Mind, he thus lays out his plan :

" The attributes of the mind, which seem to be of a per-" manent nature, are here considered as 'properties' (intending " such as perception, memory, &c.) ; those which are occasionally " exerted and operate with effort as 'powers ;' and those which " may be perceived only occasionally, and which vary in degree or " kind in different persons, as 'qualities.' As Reason and Will " are 'properties' of the mind, and yet exerted as 'powers,' they " are treated under both heads."

OF IDEAS.

" As I may not use the word in a customary sense, I think " it right to explain what I mean by ideas. When I see a " beautiful prospect illuminated by the sun, I have a *perception* " of light and shade. When, however, I have acquired such a " knowledge of light and shade as to be able to represent on " paper a spherical or many-sided body, I think I have acquired " a knowledge of light and shade beyond that which the *mere* " remembrance of my perception would have produced. I shall, " therefore, express myself as follows : Our knowledge consists " of perceptions and deduction from them, which may be called " ideas, opinions, thoughts. In reasoning, we employ these " intellectual deductions, as we employ the perceptions of the " facts themselves."

OF ABSTRACTION.

He observes : " It does not appear that we have the power " of abstracting the mind from the consideration of any subject, " except by engaging it in some other."

OF BENEVOLENCE.

" Benevolence is necessary, because it enlarges our sphere of " happiness by rendering us participators in the happiness of " others—besides producing, by sympathy, similar feelings in " others."

In a series of propositions on the exercise of mind, he impresses the mischief of admitting or indulging erroneous trains of thought, as illustrated by " the fears arising from bad management " in childhood,—by persistence in vice after the gratification has " ceased and the destruction certain; and also in contributing " to the production of insanity. Or, on the other hand, he considers the *advantage* of exercise in correct trains of thought; that the powers evinced by Newton, and, in certain cases, by Johnson, to have been unattainable, but as the result of such exercise. He enlarges on the moral effects of habitual increase of power in diverting the mind at will to other objects, and so subduing anger, mitigating calamity, &c.

In illustrating the intensity that recurrence of impression is apt to give to the feelings, he says: " Benevolence indulged, " leads to lasting friendship; whilst the harbouring sensations of " even trivial disgust are too likely to develop animosity," &c.

In speaking of the difficulty of ascertaining all the *facts* and *feelings* which enter into the formation of any one's opinions, he says: " It ought to incline us to think modestly of our own, " and pay deference to those of others."

The impropriety of " anything like compulsion to make men

" think alike by other than *their own temperately induced con-* " *victions* is never more clear than in regard to religion; for the " aim of Christianity is general benevolence and individual " humility—benevolence even to the forgiveness of error. Has " not this been illustrated in the highest degree by its Supreme " Author, when He said, 'Father, forgive them; they know not " 'what they do?' Does not Christianity enjoin the very " reverse of that which we are constantly pursuing, by which we " excite dissension and cultivate an arrogance incompatible with " the character of a Christian."

He concludes one chapter thus:

If we said to others, who agree in the main points of religion, " We are brothers, let each think as his own mind dictates,—it " is probable that all would soon think alike, because all would " think without passion or prejudice."

He considers the most exalted of all manifestations of divine mercy, "the atonement of sin by the sufferings of Christ, and " the promulgation of precepts which, if practised, ensure tem- " poral and eternal happiness." And, in another place, he speaks of the gratitude that man should feel in "that his Creator has " thus condescended to be his Redeemer," &c.

Of the Scripture precept—" To do justice, to love mercy, " and to walk humbly with thy God"—he observes, " that it " contains precepts so clear as to be intelligible to any capa- " city—so strikingly just as to gain our immediate accordance— " and so comprehensive as to include every event which can occur " in life," &c. Yet he says, "it is the property of truth, however

" beautiful it may appear at first sight, to seem more and more " so, in proportion as it is minutely examined." MSS.

In deprecating pride, whether of mind, body, or estate, after discussing the latter, he remarks on the more seductive influence of intellectual superiority; he says: "The mind is no more ours " than the body;" that the success of intellect depends on varieties of opportunity, qualities of mind, &c.; that all are alike given us, and that any merit which the mind may bring, consists, not in the successes of intellect, but in the purity of the motive by which they are guided.

PRIDE OF POSITION.

" It requires great and constant reflection to prevent a man " from becoming vain, who is placed in high office. He receives " such constant deference and respect to his opinions and wishes " from all around him, such ready obedience, that he might be " led to imagine he was a creature of superior order."

In some memoranda connected with things which had vexed him, we find: " If justice, good will, and candour, were common, " the world would be too happy; it would not be what it now is " —a state of exertion and trial; of strenuous efforts, which " contribute to the general good; and, when efforts are unavailing, " of trials which demand fortitude, patience, and submission." MSS.

In allusion to some preceding reflections, "It being intended to " show that the conduct enjoined by the Scriptures is the same that

" philosophy should inculcate, and that the preceding considera-
" tions would not only almost persuade, but oblige every one to
" be a Christian in conduct, whatever he might be in creed."

" To me it seems that the inspired origin of Christianity
" may be fairly inferred from its wonderful adaptations to the
" wants and feelings of the human mind. The Author of the
" Christian Religion knew the mind of man, and all those feelings
" and considerations which support and confirm him in well-doing.
" That feelings, to become vivid, strong, and habitual, must be
" often repeated; and therefore that prayer and the ceremonials of
" Religion were not only right, but due to that Power by whose
" ordinances we live, and move, and have our being. How
" perfect a knowledge of the human mind evince those precepts
" which instruct us, distrusting our own constancy, to shun
" temptation and evil society. To engage ourselves in constant
" and useful employment, and to suppress the first movements of
" the mind, which, if continued, would urge us with increased
" force and velocity to error. Human observation teaches that
" the feelings of man are the source of their happiness or misery,
" and the causes of their conduct. The Christian Religion
" operates on our feelings, by teaching us the government of the
" mind, and showing that sin ~~Christianity~~ does not consist merely in
" evil doing, but in evil thinking."

We here conclude the extracts which we think it necessary to submit to the reader, and we hope that they have not been more than in keeping with the objects we proposed to observe. In all the reasoning in his papers, Abernethy, whether we suppose him right or wrong, is remarkably clear and consistent. If he discourses on matter, or spirit, or any other principle, he simply regards the phenomena they can be made to exhibit, regardless of any opinion mankind may have formed as to their *real* nature. He regards our ignorance of the intrinsic nature of matter or spirit merely as an example of our ignorance of that which is beyond the scope of our present faculties. This, in science, is *studying* facts and laws, as contrasted with speculation and conjecture; in religion, it seems to be attention to the Command and the study of the Word, as contrasted with that of the intrinsic nature of Him who gave it; and, in thus suggesting the legitimate path of mind in regard to both, is at once philosophical and religious.

It would have been easy to have multiplied the analogies of science and religion, and especially those which, in warning us before hand of those difficulties which occur in the prosecution of science, tend to gird us with the requisite firmness and moderation in bearing up against, or in surmounting them. Few have cultivated science with success, without encountering more or less of those evils which have been so commonly opposed to the more devoted advocates of religion. So, also, some of the most useful discoveries have been the mission of men of obscure origin. Again, discoveries in science have frequently had to brave distrust, ridicule, injustice, and all kinds of opposition. It would, indeed, seem that nothing really good can in this world be attained without sacrifice; much less truth—that best of all; and he among us who is not prepared, in his search for the truths of Science, to add his mite of something that the world most values, might perhaps as well take Science as he finds it, and avoid a labour which, without sacrifice, will be almost certainly abortive.

That Abernethy's idea of religion was eminently practical, is every where apparent in his reflections; yet, while he seems to have felt that "faith, without works, is dead," he unmistakeably evinces his conviction as to the foundation on which he thinks *good* works can alone be secured.

The extracts we have made, and all Abernethy's writings, appear to bear witness to a marked sincerity of character. We see that, whether he lectured at the College of Surgeons, or spoke to his pupils, who paid him for his instructions—whether he addressed the public who joined with the profession in establishing his eminent position—whether he published with his name or without it; or addressed his sentiments to his family, unheard but in the sacred precincts of home,—we find his thoughts and his language always the same. He had no dress thoughts, no company mind-clothing; he was always the same, simple, earnest, and sincere. In his very earliest papers, in his lectures at College, or in those of the Hospital, we never entirely lose sight of the golden thread to which I have before alluded. The bulk of the discourse is always the question that is really and properly before him; yet he seldom concludes the argument philosophical, without glancing (and it is in that just keeping as to be seldom more) at its ethical or its theological relations.

CHAPTER XXXI.

"It is the duty of Criticism neither to depreciate, nor dignify by partial "representations; but to hold out the light of reason, whatever it may discover."

JOHNSON.

IN tracing the progress of science, it is difficult to assign to each individual his just share of merit. The evidence, always incomplete, seldom allows us to do more than to mark the more fortunate, to whom, as it were, the principal parts have been allotted. The exposition of truth generally implies a previous contest with error. This may, in one sense, be compared with military achievements. We hear of the skill and wisdom of the General and his associate Chiefs; but little is known of individual prowess, on the multiplication of which, after all, the result depends.

To one who conferred so many obligations on his country and on mankind as Abernethy, it is difficult to assign only his just share; and yet it is desirable that nothing be ascribed to him which is doubtful or disputable.

Antecedently to Abernethy's time, and contemporaneous with the date of Mr. Hunter's labours, surgery had, in the best hands, and as a mere practical *art*, arrived at a respectable position; still, in Abernethy's early day, barber-surgeons were not yet extinct; and, as he jocosely phrased it, he himself had "doffed his cap" to barber-surgeons. There is no doubt that some of them had arrived at a very useful knowledge. The celebrated Ambrose Paré was a French barber-surgeon. When Abernethy entered into life, the best representative of the regular surgery *of that day* was Mr. Pott, who was contemporary with the period of Mr. Hunter's labours. Mr. Pott was a good surgeon, an eloquent lecturer, a scholar, and a gentleman; and he gave some surgical lectures at St. Bartholomew's Hospital. We have perused two manuscript copies of these lectures, which are in the library of the Royal Medical and Chirurgical Society, and they contain many useful and judicious observations. There are ripples of a more humane and scientific surgery, and many parts that are suggestive of onward study. Pott had also the good sense to perceive the measured pretensions of his own time, and to predict advances on it, as great as that itself was on the surgery of his predecessors: but we do not perceive anything in Pott's lectures in the shape of a science. *Extensive* generalizations we are not thinking of; we have them *yet* to get; but we see nothing, in the true sense of the word, even axiomatic. There are no steps, no axioms, by which we can reach the platform of more general propositions. In some of his operations, the most elementary principles are either not perceived or neglected; and, although there are general recognitions of the state of the health influencing the so-called surgical maladies, there is no definite principle developed. It is a recognition scarcely more than that implied in the older surgical writers, when, if the surgical part of a case did not go on well, they recommended the calling in of a physician.

In this state of things, John Hunter began a beautifully simple, and, in its bearings on surgery, we may add, a new mode of inquiry. He saw that there was much in all animals that was common, and that there were analogies in the whole organic kingdom of nature; hence he sought to develop, by observation of the various processes in various animals, and their nearest analogies in vegetables also, the *true relations* of the phenomena observable in man. It was not that he did that which had never been attempted before, in the abstract, but that he undertook it with a new, a concentrated unity of purpose. He did not employ, as it were, a different instrument to collect the rays of light from surrounding nature; but he concentrated them into a focus on a different object—the nature and treatment of disease. His labours, though not permitted to endure for many years, interrupted by indisposition, and suddenly stopped by death, were abundantly fruitful; they enabled him to simplify much of surgery that was officious and hurtful, and to correct many errors. He first gave a reason for this or that proceeding, founded on actual observation of natural processes: thus, in healing of wounds, the natural and healthy were distinguished from unnatural and unhealthy processes, and so forth. But as Mr. Hunter's enlarged views taught him the the value of the *relations* observable throughout the whole animal creation, he contemplated *parts* of the body only as a step to the more successful observation of the *whole*. As before stated, he observed the phenomena exhibited by the various organs, both separately and in connection; traced them with elaborate circumspection, and concluded by justifying what Abernethy said, when he observed: "Hunter proved that the whole body sympathized "with all its parts."

Now, many of the facts which Mr. Hunter remarked in the relations established between defferent parts of the body, were, in the strictest sense, axiomatic—that is, they were exemplifications of laws to which they were the necessary steps. Take one for example: that the part sympathetically affected by an impression primarily made on another part, appeared to be frequently *more disturbed* than the part with which it had appeared to sympathize. This we now know to be no exception, but rather the law; because the exceptions (as we contend*) are explicable; but that was not then perceived. Abernethy, however, made use of this so far as to impress the fact, that organs might be seriously disordered without there being *apparently* any symptoms referable to them.

Now, Abernethy might have continued to labour as Hunter did in collecting facts as the materials for axioms, or as elements for future and more extensive generalization; or he might have at once taken Mr. Hunter's views, so far as he had gone, and, working on them with his remarkable aptitude for perceiving the more salient and practicable relations of facts, have applied them at once to practical purposes; gleaning more facts as his extremely acute observation might have enabled him on the way. He pursued, perhaps, neither course exclusively; but the latter appeared to be the one he chiefly adopted; and, from the more immediate fruition it affords, no doubt it was best adapted to the existing exigencies of a practical profession.

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* *See* "Medicine and Surgery One Inductive Science." 1838.

John Hunter was a man of indefatigable industry, and exceedingly *circumspect* in his observance of facts. Abernethy was fagging too, but more impulsive and not so dogged; mere facts were mere bores to him; he panted for *practical* relations, and was most wonderfully quick in perceiving them. His vision was as penetrative as Hunter's had been circumspect and cautious. Hunter would have sifted all the useful things out of any heap, however heterogeneous; Abernethy would have looked through it, at once found the one jewel that it concealed, and left the rest for the next comer. They were both most perfectly honest and truthful, both careless of money, both enthusiastic in science—that is, both ardent in the pursuit of truth, with that kind of feeling which does not stop to examine the utilitarian relations of these pursuits; but which, carried on by a continually increasing impulse, takes the good for granted, and is impelled by the love of truth for its own sake.

But, interesting as it is to contemplate those requisitions which, as indispensable, are common to the successful investigators of science, it is yet more so to observe the *distinctive* characters of John Hunter and John Abernethy. The former, with many ideas to tell, and most of them new, had a difficulty in expressing himself. With more need than any man before him for additional facilities in this way, he had a restricted vocabulary. Again, in making use of it, his style was seldom easy, often obscure; so that things which, when thoroughly understood, had no feature more striking than their simplicity, were often made to appear difficult, and by many readers, no doubt, had often been left unexamined.

Abernethy, on the contrary, had a happy facility of expressing himself, and a power, rarely equalled, of singling out the difficult parts of a subject, and simplifying them down to the level of ordinary capacities. Hunter, though not without imagination, or humour even, had these qualities held in abeyance by the unceasing concentration of his intellectual faculty. As Abernethy used to say, "John Hunter was always thinking." Abernethy, on the contrary, had an active imagination; it always accompanied his intellect, like a young, joyous attendant, constantly lighting up the more sombre propositions of her grave companion with varieties of illustration. The most difficult proposition, directly Abernethy began to fashion it, had all its rough points taken off, and its essential features brought out clear and orderly to the plainest intellect. John Hunter, in laying down a series of facts having the most important influence in the formation of a medical science (take place when it may), was not able to keep people awake. Abernethy's treatment of the most dry and unimportant, kept his audience unceasingly interested. The obscurity of language in Hunter was happily replaced, not only by an unusual ease, but by a *curiosa felicitas*, in Abernethy. In sustained composition, Hunter was generally difficult, often obscure; Abernethy, if not faultless, always easy and unaffected. If his style failed sometimes in earnestness and vigour, it was always sincere; and whilst, though not deficient in eloquence, it asserted no special claim to that excellence, it was always pleasing and perspicuous.

Nothing could be further from the earnest and thinking John Hunter than anything dramatic. Abernethy had that happy variety of countenance and manner that can be conveyed by no other term. Hunter, without being slow, was cautious, circumspect: Abernethy, without being hasty, was rapid, penetrative, and impulsive. Never were two minds so admirably fitted for the heavy-armed pioneering in science, and the comparatively light-trooped intellect which was calculated to render the first clearing easily convertible to those practical necessities with which the science had to deal. Accordingly we find that Abernethy very soon extended Mr. Hunter's views, and applied them so powerfully, as at least to create the dawnings of a science. He showed that all processes in the economy—and of course, therefore, those of disease—are essentially nervous in their origin: that is to say, the nerves being the *instruments* through which our relations are established with surrounding nature (however much we may, in common language, speak of this or that feeling, this or that *organ*, or this or that part of the body), all impressions must still be made primarily on the sensitive or nervous system of that part; and this, of course, whether they imply *consciousness*, or be altogether independent of it; that disturbed nervous action was, as the case might be, either the forerunner—or the next link in the chain of causation (i. e. the proximate cause)—of the disease; and that therefore the relief of diseased or disordered actions, however attempted, consisted ultimately and essentially in the restoration of healthy nervous power, or adaptation.

This, then, is the first proposition. The next thing, and which necessarily follows, is, that in the prevention or cure of disease, the first object is the tranquillizing of nervous disorder.

Now, here there are many things to be regarded; for man is a moral as well as a physical being; and the circumstances by which he is surrounded, even the air he breathes, the moral and physical impressions to which he is subjected, are very often not under his own control, much less that of his medical attendant. On the other hand, the food is, in civilized communities, very much under the influence of his volition; and there are many circumstances which, instead of impeding those adaptations which disorder requires, renders them particularly easy—it frequently happening that those things which are really best, are most easily procured. This is important; because the next proposition is, *that the nervous system is very easily and constantly disturbed by disorder of one or other, or of the whole of the digestive organs*, and that therefore the tranquillizing of disturbance in them is of the highest consequence in the treatment of disease: *few* propositions in *any* science are more susceptible of proof than the foregoing. But if this be so, we must now recollect the full force of what we have observed with regard to relation; that is, we must not restrict our notion of it to the general loose assent that there is *a* relation in all parts of the body, and rest on the simple admission, for example, that animals are formed in adaptation to their habits; but we must sustain the Cuvier-like impression of the fact, the Owen-like application of it to the phenomena; recollect that *preconceived* ideas of magnitude and minuteness can do nothing but obscure or mislead; and that the relations established in the body are constant and universal, however they may at first—as in the case we have quoted—excite the surprise or the derision of the less informed and less reflecting. We must take their immensely potential power as existing *as certainly in the most trifling headache, as in the most malignant fever*—in the smallest scratch, *as in the most complicated compound fracture.* We have plenty of facts now to *prove* this; but the first plain, clear enunciation of it all, the successful demonstration of it at the bedside, and the consequent diminution of an enormous amount of human suffering, is the great debt we owe to Abernethy. Mankind in general admitted that Diet was of consequence. Nobody doubted its force as an *accessory* in treatment. Lactantius said: "Sis prudens ad victum sine quo cetera remedia frustra adhibentur." But no one had recognized the treatment of the Digestive Organs as the essential part of the treatment of *surgical* diseases, nor founded it on the same comprehensive view of its relations as addressed to organs which executed the nutritive functions of the body on the one hand, and were the *most potential disturbers or tranquillizers of the nervous system on the other,* and thus for ever linked them in their practical relations with the fact, that the essential element of disease, the *fons et origo,* is disturbed nervous power. But, as all diseases are merely the result of two conditions—namely, the injurious influence acting, and the body acted on—it matters not whether the injurious influence be sudden, violent, slow, moderate, chemical, mechanical, or what not; so the foregoing positions affect the whole practice of medicine, and must not be held as affecting any one part of it, but as influencing equally both medicine and surgery.

We do trust that these few propositions will induce some to think; for, as Abernethy used to say, lectures will never make surgeons: and we feel equally confident that no books, no individual efforts, however costly or sincere, will really benefit or inform any portion of the public or the profession, except such of them as may be induced to *think* for themselves. They have only to recollect that, in carrying out such principles, they must not measure their influence by their previously conceived notions; they must encourage labour when they see the profession willing, and not thwart them by showing that it will be labour in vain. There will soon be science, if it is encouraged:

> "Sint Mæcenates, non deerunt Flacci."

If they are disposed to think investigation too minute to be practical, or precision too unpleasant to be necessary, let them remember the story of Professor Owen's beautiful application of minute relation, and that the distinction between a huge common quadruped and an unknown wingless bird could alone be discovered by particulars far more minute than they will be called on once in a hundred times to observe or to follow. The obligation we have already noticed has in some sense revolutionized the practice of medicine and surgery, and is no doubt the capital debt we owe to Abernethy; but there are many others. His application and adjustment of the operation of the trephine was a beautiful and discriminating achievement, and would alone have been sufficient to have raised an ordinary reputation.

His first extension of John Hunter's operation for aneurism, shows how ready he was—when he could do so with advantage—to enlarge the application of that branch of our duties which he least valued—namely, operative surgery.

His proposal to add to the treatment of the diseases of joints the apparatus of splints, for ensuring absolute quiescence of the affected surfaces, has saved a most incalculable number of limbs from amputation. It here becomes necessary to repeat a remark we have made in a former work. Sir B. Brodie recommends this plan only in the third edition, I think, of his discriminative work on the joints, not appearing to have been aware that Abernethy taught it for nearly thirty years previously, about ten years of which we ourselves had repeatedly tested its great value, and taught it, but contemporaneously from Abernethy, in our own lectures. Indeed, so important an element is it in the treatment of diseases of the joints, that we have never seen it fail, when fairly applied and accompanied by a reasonable attention to the general health, except in the following cases: First, when the patient has been nearly worn out by disease, before being subjected to treatment; and, secondly, where the complaint has been proved to be accompanied by internal organic disease.

We have always thought that one of the most valuable of our obligations to Abernethy was his lesson on fracture of the neck of the thigh bone within the capsule of the joint. For thirty years, Sir Astley Cooper taught, and boasted that he had taught, that this fracture could not unite by bone; Sir Astley reasoning on the anatomy of the part *only*, and conceiving that the neck, in its somewhat isolated position, would be imperfectly nourished; and, seeing that, in point of fact, this fracture *did generally* unite by ligament only, unfortunately adopted the foregoing idea as the *cause* of the fact, and concluded that bony union was impracticable. Experiments on animals—at all times extremely fallacious, in this case singularly imperfect in the analogy they afforded—appeared to confirm his views. Despairing of effecting a proper union, he adopted a treatment which rendered it impossible. Abernethy's beautiful reasoning on the subject led him to an opposite conclusion. It embraced certain views of Hunter's, and some common phenomena in other accidents where the union by ligament is *coincident* with *motion* of the part. He therefore treated all cases with a view to secure bony union; and he and many of his pupils had no doubt but that they had seen examples of its success. Still, people got well and were lost sight of, and therefore it was said that the fracture was not *wholly* within the capsule of the joint. At length a specimen was procured from the examination of a dead body, and the question set at rest, we believe, in the minds of every body, that this fracture, though it require especial care to keep parts steady and in apposition, will unite just like other fractures in the way taught (and since proved) by Abernethy. Let those who can calculate the number of surgeons who have been educated by these two gentlemen, and who, for the first few years, would have almost certainly followed the practice of their instructors, compute the number of those of the lame who, under Providence, have walked in consequence of the clear-sighted reasoning of Abernethy.

How the French surgeons may have been influenced by

Abernethy on this subject, I do not know. When I was first in Paris, in 1824, they were divided; but I recollect Baron Larrey showing me a case which he regarded as a clear example of this fracture in course of firm consolidation, and he was well aware of the opinion of Abernethy.

The bearing which Abernethy's acuteness of observation of the influence of the state of the digestive organs on so-called specific poisons in producing or maintaining diseases resembling them, opposed as it was to the most powerful conventionalism, is a proof of his clear judgment; and, if we mistake not, will one day prove to have been the first ripple of a most important law in the animal economy, which will shed a light as new on specific affections as his other principles have on diseases in general.

His treatment of that severe malady, "lumbar abscess," is, in our view, a most acceptable addition to humane and successful surgery; and as regards one of its distinctive characters, he has, as we have shown, received the encomiums of the most distinguished of his contemporaries, including Sir Astley Cooper.

The manner in which he applied that law which prevails in voluntary muscles to the replacement of dislocations—namely, that muscles under the influence of the will cannot ordinarily act long and unremittingly—was an amendment as humane as scientific; and, whilst it has removed from surgery a farrier-like roughness in the treatment of dislocations, as repulsive as unnecessary, it has adjusted the application of more sustained force, when it becomes necessary, on principles at once humane, safe, and effectual. In short, whatever part of surgery we consider, we should have something to say of Abernethy—either something new in itself, or improved in application. We find him equally patient and discriminative, wherever there is danger; thus there is the same force and originality on the occasional consequences on the simple operation of bleeding in the arm, and the more serious proceeding of perforating the cranium. He is every where acute, penetrating, discriminative, humane, and practical; so that it is difficult which most to admire, his enlarged views in relation to important general principles, or the pervading science and humanity with which he invests their minutest details.

Hunter's method of investigation was highly inductive; and, whenever he adhered to it, the structure he has left is stable, and fit for further superadditions. Whenever he proceeded on any preconceived notions, or on an induction manifestly imperfect, his conclusions have, as we think, been proved unsound. His definition of disease, as distinct from accidental injury, is one instance which we formerly noticed in our own works; and some of his conclusions in regard to poisons—as mercury, for example—will not hold; but all that Abernethy made use of, either in developing his own views or maturing their practical applications, were sound and most careful deductions from obvious and incontrovertible facts. Abernethy took equal care to deduce nothing from them, or from anything of his own observations, but the most strictly logical inferences—conclusions which were, in truth, little more than the expression of the facts, and therefore irrefragable. He showed that, however dissimilar in kind, nervous disturbance was the essential element of disease; and that the removal of that disturbance was the essential element of cure. That no mode should be neglected, therefore, which was capable of exerting an influence on the nervous system; but that, whether he looked at the subject as mere matter of fact, or as assisted by the phenomena of health or disease generally, or merely to that which was *most within our power*, no more potential disturbers of the nervous system were to be found, than disordered conditions of the digestive organs; and that the tranquillizing of these must always be a leading object in our endeavours to achieve the still greater one of tranquillizing nervous disorder.

The absurd idea that he looked chiefly to the stomach—that he thought of nothing but blue pills or alterative doses of mercury—need scarcely detain us. His works show, and his lectures still more, that there was no organ in the body which had not been the object of his special attention; in almost all cases, in advance of his time; and not exceeded in practical value by any thing now done. We know of nothing more valuable or clear *now* than his paper on the skin; nothing so advanced or important as his observations on the lungs and skin, and the relations of these important organs; and it is unnecessary to repeat what has been already said about the digestive organs. His medical treatment was always very simple, and, if its more salient object was to correct disorders of the liver, it was because he knew that the important relations of that organ not only rendered it very frequently the cause of many disorders, but that there could be nothing materially wrong in the animal economy, by which it must not be more or less affected. He carried the same clearness and definiteness of purpose into his prescriptions, as that which characterized all his investigations; and, indisposed to employ any means except on some principle, used but few remedies; although he by no means wished to deter others from having recourse to a more extended pharmacopæia. We regret, indeed, the impossibility of doing full justice to Abernethy in any thing less than a running commentary on the publication of his works; but we have said enough, we trust, to show how largely the profession and mankind are indebted to him.

Now, in these days of testimonials, what memorials have we of Abernethy? It is true there is no monument at Westminster Abbey, and only a bust at St. Bartholomew's. His portrait, to be sure, given by his pupils, hangs at St. Bartholomew's, exalted where it can hardly be distinctly seen, to be replaced by those of Mr. Vincent*, and Mr. Lawrence in his Professor's gown! But he has still a

"Monumentum ære perennius,"

in the claim he has established to the rarely so truly earned honour of "nihil quod non tetigit, et nihil quod tetigit, quod non ornavit;" in the grateful hearts of many a pupil who had no other obligation to him than his beautiful lessons; and in an improved medical Surgery, which, though it may have in *London* rather retrograded than otherwise since his time, is felt more or less in its moral as well as its medical bearings, and in a diminution of suffering and an improved practice throughout the civilized world.

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* A contemporary of the Hospital, of whom, as a practical surgeon, Mr. Abernethy expressed a very high opinion. Until the matter was explained, Mr. Vincent's son was afraid that something "sneerlike" was intended in this passage; and we were glad of an opportunity of correcting that impression. Nothing could be farther from the intention than anything of the kind in regard to either. But it seemed to us an infelicitous result of the Governors probably having no better rule for the disposition of their portraits than that which some of us are obliged to observe in the shelves for our books—we mean the rule which has twelve inches to the foot.

But, if Abernethy's views are so true or so excellent as we allege that they are, they must have *some* relation to anything that is good in every kind of medical or surgical treatment; and this equally, whatever the system (so called) whence it may arise, however much of truth or error it may contain, or however perplexingly these qualities may be blended together. These are points on which we have yet something to say; and as we are anxious that the public and the profession should favour us with their attention to the very few remarks we have the space to offer, we must have a new chapter.

CHAPTER XXXII.

> "Quæ res neque consilium neque modum habet ullum
> Eam consilio regere non potes."
>
> TER. Eun. Act i, Sc. i.

> "Master, the thing which hath not in itself
> Or measure or advice—advice can't rule."
>
> COLMAN.

POSITION, PROGRESS, AND PROSPECTS OF THE PROFESSION — OF HYDROPATHY—OF HOMŒOPATHY—OF QUACKERY—OF PUBLIC IGNORANCE.

A WRITER*, of no ordinary judgment and discrimination, has observed, that "it often happens in human affairs that the evil "and the remedy grow up at the same time: the remedy unnoticed, and at a distance scarcely visible perhaps above the "earth; whilst the evil may shoot rapidly into strength, and "alone catch the eye of the observer by the immensity of its "shadow; and yet," he adds, "a future age may be able to mark "how the one declined and the other advanced, and how returning spring seemed no longer to renew the honours of the one, "while it summoned into maturity and progress the perfection of "the other."

We know not how it may appear to the reader, but we cannot help thinking that, in the foregoing sentence, there is a far-seeing perception of a very leading character in human affairs. There is no evil but which is charged with a certain degree of good. At first, it is indeed "scarcely visible"—nay, it escapes alike the most penetrative perception and faithful confidence, in the surpassing working-to-good of all things around us; but so soon as the evil begins to tell—so soon as the full flood of mischief becomes obtrusive or remarkable,—the small ripple of some corrective principle rises into view.

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* Professor Smythe, Lectures on Modern History, vol. i, p. 74.

It would be easy to illustrate the foregoing proposition from general history, from the progress of nations, or even from the contracted area of individual experience. But we will confine ourselves to an illustration more directly in relation to our immediate object—namely, the present condition and prospects of medical science.

There are, no doubt, many persons who view the present state of Medical Science as little better than the triumphant domination of a conjectural art, which has long obscured, and is still very imperfectly representing, a beautiful science; and that the perception of the true relations which it bears to such science has been veiled by the impression that it involved some mystery from which the general public, who were most interested in its development, were necessarily excluded.

There have been at all times individuals, perhaps, sufficiently astute to see the real truth of the matter; but still they were rare exceptions, and did not prevent Mystery from conferring, on a very considerable section of people, the social advantage of a gainful profession; that property being enchanced, of course, in that it ministered to an ignorant public. But, even in an early stage, correctives to an equivocally-earned advantage began to appear; for a thing which had no character but its indefiniteness, and its apparent facility of acquisition, obtained many followers: the supply, such as it was, was thus so close in relation to the demand, that what in theory seemed necessarily very gainful, in practice, on the whole, proved anything but a lucrative profession. As contrasted with any other, or a variety of commercial pursuits, medical men were neither so affluent, nor always so secure of their position. Retiring competency in well-conducted callings has, in a rich country, been rather the rule. We fear, in the medical profession it is the exception; which, we are apprehensive (in its bereaved dependents), contributes more applicants for eleemosynary relief than any other.

This surely is not a state of things which can be well made worse. Public ignorance, the *real mischief*, has, in the meantime, been left uninformed; and any attempt to enlighten it has too often been branded with some kind or other of corrupt motive. Public positions have been conferred without competition—the surest test of fitness or excellence; and the public have been further doubly barred out, in that the chance of eliciting men of spirit and enthusiasm has been diminished, by the first positions having been often rendered contingent on the payment of money in the right quarter.

But all this time corrections were slowly springing up. Hundreds were beginning, under the light of a more liberal diffusion of general knowledge, to feel that the so-called Science of medicine and surgery was very different from science usually so termed; and, whilst other sciences were affording that which was definite and positive, the juxtaposition only seemed to bring out in higher relief the prevailing character of conjecture and uncertainty in medicine.

People began to see that, in mere human occupation, mystery is but mystery, to whatever it is applied; and that one man can see in the dark about as well as another; that, where all is obscure, any one may scramble with a chance of success. Accordingly, we observe that a state of things has gradually been rising up, which, if it do not justify the expression of *quot medici tot empirici*, at least leads us to deplore that, of all callings in life, no one had ever such a legion of parasites as are represented by the hydra-headed quackeries which infest the medical profession. Naturally enough, too, Quackery attacked chiefly those disorders in regard to which Mystery avowed its incapacity, or declared to be incurable; and thus, while the regular profession made their *own limited* knowledge the measures of the *powers of* *nature,* the quacks unconsciously proceeded, *de facto,* more philosophically, when they neither avowed nor acknowledged any other limits than those of observation and experience.

Amongst, no doubt, innumerable failures, and, as we know, a multiplicity of fictions, they would now and then, in acting violently on the various organs, blunder on the last link in the chain—the immediate cause of the disorder; and perhaps effect the removal of a so-called incurable malady. Thus, whilst the regular profession were making their own knowledge the *measure* of remedial possibility, and were reposing contentedly on the rule, they were every now and then undermined, or tripped up, by unexplained exceptions.

It is difficult to conceive any state of things, when once observed, more calculated to drive men to the obvious remedy that a definite science would alone afford; nor should it be forgotten that multiform quackeries, with mesmerism to boot, are coincident with a system which allows *not one single appointment,* which the public are requested to regard as implying authority, to be open to scientific competition. Of late, many persons have begun to examine for themselves questions which they had been wont to leave entirely to their medical adviser.

The sanitary movement has shown that more people die every year from avoidable causes than would satisfy the yawning gulf of a severe epidemic, or the most destructive battle. In a crowded community, many events are daily impressing on the heads of families, besides the expedience of avoiding unnecessary expenses, that long illnesses are long evils; that their dearest connections are sometimes prematurely broken; and that parts are not unfrequently found diseased which are not suspected to be so during life. The thought will sometimes occur whether this may have been always consequent on the *difficulty* of the subject, or whether it may not have been sometimes the result of *too hasty or too restricted* an inquiry; that not only (as the Spanish tutor told his royal pupil of kings) do patients die "sometimes," but very frequently.

These and other circumstances have induced many of the public to inquire into the reason of their faith in us; and to ask how it happens that, whilst all other sciences are popularized and progressing, there should be any thing so recondite in the laws governing our own bodies as to be accessible only to comparatively few; especially as they have begun to perceive that their interests, in knowing such laws, is of the greatest possible importance.

Amongst various attempts to better this condition of things, the imagination of men has been very active. Too proud to obey the guidance, or too impatient to await the fruition, of those cautious rules which the intellect has imposed on the one hand, and which have been so signally rewarded (whenever observed) on the other, imagination has set forth on airy wing, and brought home curiosities which she called science, and observations which, because they contained *some* of that truth of which even fancies are seldom entirely deprived, blinded her to the perception of a much larger portion of error.

Two of these curiosities have made considerable noise, have been not a little damaging to the pecuniary interests of the medical profession, and have been proportionately species of El Dorados to the followers of them. We allude to the so-called Homœopathy and Hydropathy.

Homœopathy proceeds on an axiom that diseases are cured by remedies which excite an action similar to that of the disease itself; "*Similia similibus curantur.*"

Our objection to this dogma is twofold, and, in the few hints we are giving, we wish them not to be confounded.

1st. It is *not* proven.

2nd. It is *not* true.

Take the so-called fever. The immediate and most frequent causes of fever are bad air, unwholesome food, mental inquietude, derangement of the digestive organs, severe injuries. Now it is notorious that very important agents in the cure of all fevers are good air, carefully exact diet or temporary abstinence, and correction of disordered functions, with utmost repose of mind and body, and so forth.

So of small-pox, one of the most instructive of all diseases. All the things favourable to small-pox are entirely opposite to those which conduct the patient safely through this alarming disease; and so clearly is this the case, that, if known beforehand, its virulence can be indefinitely moderated, so as to become a comparatively innoxious malady.

We might go on multiplying these illustrations to almost any extent. What, then, is the meaning of the *similia similibus curantur?* This we will endeavour, so far as there is any truth in it, to explain. The truth is, that Nature has but one mode, principle, or law, in dealing with injurious influences on the body. Before we offer the few hints we propose to do on these subjects (and we can here do no more), we entirely repudiate that sort of abusive tone which is too generally adopted. That never can do anybody any good. We believe both systems to be dangerous fallacies; but, like all other things, not allowed to be entirely uncharged with good. We shall state, as popularly as possible, in what respect we deem them to be dangerous fallacies, and in what we deem them to be capable of effecting some good; because it is our object to show, in respect to both, that the good they do is because they accidentally, as it were, chip off a small corner of the principles of Abernethy.

Homœopathy is one of those hypotheses which show the power that a minute portion of truth has to give currency to a large quantity of error; and how much more powerful in the uninformed are appeals to the imagination than to the intellect. The times are favourable to homœopathy. To some persons, who had accustomed themselves to associate medical attendance with short visits, long bills,—a gentleman in black, all smiles,—and a numerous array of red bottles, homœopathy must have addressed itself very acceptably. It could not but be welcome to hear that all the above not very pleasing impressions could be at once dismissed by simply swallowing the decillionth part of a grain of some efficacious drug. Then there was the prepossession so common in favour of mystery. How wonderful! So small a quantity! What a powerful medicine it must be! It was as good as the fortune-telling of the gipsies. There! take that, and then you will see what will happen next! Then, to get released from red bottles tied over with blue or red paper, which, if they were not infinitesimal in dose, had appeared infinite in number, to say nothing of the wholesome repulsion of the palate.

Besides, after the bottles, came the bill, having no doubt the abominable character of all bills, which, by some law analogous to gravitation, appear to enlarge in a terrifically accelerating ratio, in proportion to their longevity; so that they fall at last with an unexpected and a very unwelcome gravity. Then homœopathy did not restrict itself to infinitesimal doses of medicine, but recommended people to live plainly, to relinquish strong drinks, and, in short, to adopt what at least seemed an approximation to a simple mode of living. To be serious—what, then, are the objections to homœopathy?

Is there no truth, then, in the dogma, "*Similia similibus curantur?*" We will explain. The *laws* governing the human body have an established mode of dealing with all injurious influences, which is identical in principle, but infinitely varied and obscured in its *manifestations*, in consequence of multifarious *interferences;* in that respect, just like the laws of light or of gravitation. As we have no opportunity of going into the subject at length, we will give a hint or two which will enable the observing, with a moderate degree of painstaking, to see the fallacy. You can *demonstrate* no fallacy in a mathematical process even, without some work; neither can you do so in any science; so let that absence of complete demonstration be no bar to the *investigation* of the hints we give. All medicines are more or less poisons; that is, they have no nutritive properties, or these are so overbalanced by those which are injurious, that the economy immediately institutes endeavours for their expulsion, or for the relief of the disturbance they excite. All organs have a special function of their own, but all can on occasions execute those of some other organ. So, in carrying out injurious influences, organs have peculiar relations to different forms of matter; that is, *ordinarily*. Thus, the stomach is impatient of ipecacuanha, and substances which we call emetics; the liver, of mercury, alcohol, fat, and saccharine matters; and so forth. In the same way we might excite examples of other organs which ordinarily deal with particular natural substances. But then, by the compensating power they have, they *can* deal with any substance on special occasions.

Now the natural mode in which all organs deal with injurious substances, or substances which tend to disturb them, is by pouring forth their respective secretions; but if, when stimulated, they have not the power to do that, then they evince, as the case may be, disorder or disease. Thus, for example: If we desire to influence the secretion from the liver, mercury is one of *the many things* which will do it. But if mercury cease to do this, it will produce disease; and, if carried to a certain extent, of no organ *more certainly* than the liver. Thus, again, alcohol, in certain forms, is a very useful medicine for the liver; yet nothing, in continuance, more notoriously produces disease of that organ. So that it happens that all things, which in one form disorder an organ, *may,* in another form, in greater or more continued doses, tend to correct that disorder, by inducing there a greater, and thus exciting stimulation of its secretions.

This is the old dogma, long before homœopathy was heard of, of one poison driving out another. This is the way in which fat bacon, at one period, or in one case, may be a temporary or a good stimulant of a liver which it equally disorders in another; for as the liver is a decarbonizing agent, as well as the lungs, so articles rich in carbon are all stimulants of that organ; useful, *exceptionally;* invariably disordering, if *habitual* or *excessive.*

But if this be so, what becomes of the "*curantur?*" To that, we say it is far from proven. Medicine hardly ever—perhaps never, *strictly speaking*—cures; but it often materially assists in putting people in a *curable condition,* proper for the agencies of more natural influences. True. Well, then, may not homœopathy be good here? We doubt it; and for this reason: Medicine, to do good, should *act* on the organ to which it is directed; it is itself essentially a poison, and does well to relieve organs by which *it is expelled;* but if you give medicine in very small doses, or so as to institute an artificial condition of *those sentinels,* the nerves, you may *accumulate a fearful amount of injurious influence in the system before you are at all aware of it.* And it is the more necessary to be aware of this in respect to homœopathy;

because many of the medicines which homœopathists employ are active poisons; as belladonna, aconite, and so on. We have seen disturbed states of nerves, bordering on paralysis, which were completely unintelligible, until we found that the patient had been taking small doses of narcotic poisons. We have no desire whatever to forestall the cool decisions of experience; but we earnestly request the attention of the homœopathist to the foregoing remarks; and, if he thinks there is anything in them, to peruse the arguments on which we found the law of which we have formerly spoken*.

We must in candour admit that, as far as the inquiry into all the facts of the case go, as laid down by Hahnemann, we think the profession may take a hint with advantage. We have long pleaded for more accuracy in this respect; but we fear, as yet, pleaded in vain. Homœopathic influences may be perhaps more successful. Practically, the good that results from homœopathy, as it appears to us, may be thus stated: that if people will leave off drinking alcohol, live plainly, and take very little medicine, they will find that many disorders will be relieved by this treatment alone.

For the rest, we fear that the so-called small doses are either inert, or, if persisted in so as to produce effect, that they incur the risk of accumulating in the system influences injurious to the economy; which the histories of mercury, arsenic, and other poisons, show to be nothing uncommon: and, further, that this tends to keep out of sight the real uses and the *measured influences* of medicine, which, in the ordinary practice, their usual effects serve, as the case may be, to suggest or demonstrate.

Practically, therefore, the effects of homœopathy resolve themselves, so far as they are good, into a more or less careful diet, and small doses of medicine; which, as we have said, is a chipping off of the views of Abernethy.

We regret we have no space to consider the relation of homœopathy to serious and acute diseases. We can therefore only say that the facts which have come before us have left no doubts on our minds of its being alike dangerous and inapplicable.

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* See "Medicine and Surgery One Inductive Science" (the so-called Law of Inflammation).

One morning, a nobleman asked his surgeon (who was representing to him the uselessness of consulting a medical man without obeying his injunctions) what he thought would be the effect of his going into a hydropathic establishment? "That you would "get perfectly well," was the reply; "for there your lordship "would get plain diet and good air, and, as I am informed, good "hours; in short, the very things I recommend to you, but which "you will not adopt with any regularity."

Hydropathy sets out, indeed, with water as its staple, and the skin as the organ to which it chiefly addresses itself; but we imagine that the hydropathic physician, if he sees nothing in philosophical medicine, discovers sufficient in human nature, to prevent him from trading on so slender a capital. There was, no doubt, in the imperfection of medical science, a fine opening left for a scheme which proposed to rest its merits chiefly on an organ so much neglected.

There has never been anything bordering on a proper attention to the skin, until recently; and even now, any care commensurate with the importance of the organ, is the exception rather than the rule. Thirty years ago, Abernethy, when asked by a gentleman as to the probable success of a bathing establishment, said that the profession would not be persuaded to attend to the subject; and that, in respect to the capital which the gentleman proposed to invest in it, he had better keep the money in his pocket. This was said in relation to the general importance of attention to the skin, and also in connection with making it the portal for the introduction of medical agents generally. Abernethy was, in fact, the first who introduced into this country Lalonette's method of affecting the system by mercury applied to the skin in vapour.

Hydropathy deals with a very potent agent, and applies it to a very powerful and important organ, the skin; and it employs in combination the energetic influences, temperature and moisture

So that we may be assured there will be very little that is equivocal or infinitesimal in *its* results; that in almost every case it must do good or harm.

But it does not limit itself to these agencies. It has "establishments;" that is to say, pleasant rural retreats, tastefully laid-out gardens; plain diet; often, no doubt, agreeable society; rational amusements; and, as we understand, good hours, with abstinence from alcohol. These are, indeed, powerful agencies in a vast variety of diseases. So that, if hydropathy be not very scientific, it is certainly a clever scheme; and as there are very many people who require nothing but good air, plain living, rest from their anxious occupations, with agreeable society,—it is very possible that many hydropathic patients get well, by just doing that which they could not be induced to do before.

But here comes the objection: The skin is, in the first place, only *one* of the organs of the body, and it is in very different conditions in different people, and in the same people at different periods.

It has, like other organs, its mode of dealing with powerful or with injurious influences; and *if it deal with them* in the full force of the natural law, it affects (and, in disease, almost uniformly) favourably the internal organs; but, on the other hand, *if there be interfering influences opposed to the healthy* exhibition of the natural law, so that the skin do not deal with the cold, or other agencies, to which it is subjected, *as it naturally should do,* then the cold, moisture, or other agent, increases the determination of the blood to the internal organs, and does mischief. This it may do in one of two ways: we have seen both. 1st. The blood driven from the surface, increases, *pro tanto,* the quantity in the internal organs: it must go somewhere; it can go nowhere else. Or, if cold and moisture produce not this effect, nor be attended with a reactive determination to the surface, there may be an *imperfect* reaction; that is, *short* of the surface of the body. In the first case, you dangerously increase the disorder of any materially affected organ; in the latter, you incur the risk of diseased depositions; as, for example, Tumours. We here speak from our own experience, having seen tumours of the most malignant and cancerous character developed under circumstances in which it appeared impossible to ascribe the immediate cause to anything but the violently depressing influence of hydropathic treatment on the skin, with a co-existing disordered condition of internal organs.

In one very frightful case indeed, the patient was told, when he first stated his alarm, that the tumour was a "crisis" or reaction; as sure enough it was; but it was the reaction of a cancerous disease, which destroyed the patient. But, as we have said, hydropathy has many features which obviously minister very agreeably and advantageously to various conditions of indisposition, whilst they favour the *bonâ fide observance* of something like a rational diet—a point of immense consequence, and too much neglected in regular practice. Here again we speak from actual observation. One man allows his patient to eat what he pleases. An eminent physician replied to a patient who, as he was leaving the room, asked what he should do about his diet, "Oh, I leave "that to yourself;" showing, as we think, a better knowledge of human nature than of his profession. Another restricts his patient to "anything light." Others see no harm in patients eating three or four things at dinner, "provided they are wholesome;" thus rendering the solution of many a question in serious cases three or four times, of course, as difficult. Now we do not require the elaborate apparatus of a hydropathic establishment to cure disorders, after such loose practice as this; and we do protest against the assertion that any such treatment can be called, as we have sometimes heard it, "Abernethy's plan, attention to diet," and so forth.

So far from anything *less* than the beautifully simple views held out by Abernethy being necessary, we trust that we have, some of us, arrived, as we ought to do, at several improvements. But people will confound a *plain* diet, or a select diet, with a *starving* diet, and, hating restrictions altogether, naturally prefer a physician who is good-natured and assenting; still this assentation is being visited, we think, with a justly retributive reaction.

Hydropathy, in many points, no doubt, tends to excite attention to the real desiderata; but it is nevertheless imperfect and dangerous, because evidently charged with a capital error. It entirely fails in that comprehensive view of the relations which exists in all animals between the various organs; and on a sustained recollection and examination of which, rests the safe treatment of *any one* of them. It is, therefore, unsafe and unscientific. Again, it is illogical, because it proceeds, as regard the skin, on the suppressed premise, that it will obtain a natural reaction; a thing, in a very large number of cases, and those of the most serious kind, seldom to be calculated on.

It is quite clear, therefore, that, so far as hydropathy does good, it effects it by the institution of diet, abstinence from alcohol, country air, exercise, agreeable society, and, *we* will suppose, in some cases, appropriate care of the surface; all of which are, in a general sense, beneficial to the nervous system and the digestive organs—the points insisted on by Abernethy.

So long as the Public are not better informed, and until medicine is more strictly cultivated as a science, they will necessarily be governed by the first impression on their feelings; and so long as this is the case, fallacies can never be exposed, except by the severe lessons of experience. To hope to reason successfully with those whose feelings induce them to adopt that which they decline to examine with their intellect, is madness, and is just what Terence says of some other feelings:

> "Nihilo plus agas
> Quam si des operam ut cum ratione insanias."

But, although, therefore, we are neither hydropathists nor homœopathists, we begin to see, in the very success of these things, some good; and that the "great shadow of the evil" of a conjectural science will one day be replaced by another example of the triumph of an inductive philosophy; that the retiring confidence of the public will induce in us a more earnest and successful effort to give them a more definite science; and that, as Professor Smythe says, the "returning spring will no longer renew the honours of the one," whilst it will gradually evolve the development of the other.

The efforts, too, which the profession are already making, though, as we humbly consider, not in the right direction, will certainly arrive in time at a path that is more auspicious. When we see the hydropathist looking so much to the skin, homœopathy leading people to think of *quantities* of medicine; when, in the regular profession, we see one man restricting his views to one organ, another to another, a third thinking that *everything* can be learnt only by examination of the dead, thus confounding morbid anatomy with pathology—a fourth *restricting* his labours to the microscope, as if the discovery of laws depended rather on the enlargement of sensual objects than on the improvement of *intellectual* vision; still we cannot but perceive that these isolated labours, if *once concentrated by unity of purpose and combined action,* would be shadowing forth the outline of a really inductive inquiry.

Hydropathy and homœopathy are making powerful uses, too, of the *argumenta ad crumenam.* Their professors are amassing very large sums of money, and that is an influence which will in time probably generate exertions in favour of a more definite science. Still, Medicine and Surgery cannot be formed into a science so long as men consider it impossible; nor can there be any material advance, if they will persist in measuring the remedial processes of nature by their present power of educing them—a presumption obviously infinitely greater than any in which the veriest quack ever dared to indulge. Well did Lord Bacon see the real difficulties of establishing the dominion of an inductive philosophy, when he laboured so much in the first place to destroy the influence of preconceived opinions—idols, as he justly called them.

You cannot, of course, write truth on a page already filled with conjecture. Nevertheless, mankind seem gradually exhausting the resources of Error: many of her paths have been trodden, and their misleading lures discovered; and by and by that of Truth will be well-nigh the only one left untried. In the meantime, we fear the science is nearly good enough for the age. The difficulty of advance is founded deeply in the principles of human nature. People know that there are physical laws as well as moral laws, and they may rely on it that disobedience and disease, sin and death, are as indissolubly bound up with infractions of the one as well as the other.

It is true there are many who have (however unconsciously) discovered that the pleasures procured by the abuses of our appetites, are a cheat; and that permanent good is only attained by obeying those laws which were clearly made for our happiness.

Error has, indeed, long darkened the horizon of medical science; and, albeit, there have been lightning—like coruscations of genius—from time to time; still they have passed away, and left the atmosphere as dark as before. At length, however, there has arisen, we hope, a small, but steady, light, which is gradually diffusing itself through the mists of Error; and which, when it shall have gained a very little more power, it will succeed in dispelling.

Then, we trust, Medicine will be seen in the graceful form in which she exists in nature; as a Science which will enable us to administer the physical laws in harmony with that moral code over which her elder sister presides; but, whenever this shall happen, Surgery will recognize, as the earliest gleams of light shed on her paths of inquiry, in aid of the progress of science and the welfare of mankind, the honoured contributions of John Hunter and John Abernethy.

CHAPTER XXXIII.

"Eheu fugaces Postume Postume
Labuntur anni: nec pietas moram
Rugis et instanti senectæ
Adferet, indomitæque morti."

HOR.

"How swiftly glide our flying years,
Alas! nor piety, nor tears,
Can stop the fleeting day;
Deep-furrow'd wrinkles, frosting age,
And Death's unconquerable rage,
Are strangers to delay."

FRANCIS.

WE have already observed that Abernethy had begun to feel the wear and tear of an anxious and active life, when, after a tenure of office for twenty-eight years as assistant, he was appointed surgeon to St. Bartholomew's Hospital. After a few years, he took a house at Enfield, where he occasionally went at leisure hours, on Wednesday and Saturday; and, as the Spring Course of Lectures came near to a conclusion, and in the summer, sometimes on other afternoons. At this season, he had been accustomed to doff the black knee-breeches, silk stockings, and shoes, sometimes with, sometimes without, short gaiters, and refresh one's rural recollections with drab kerseymeres and top-boots; in which costume he would at that season not unfrequently come down to lecture. He was fond of riding, and had a favourite mare he called Jenny; and many a time have we seen her jogging along on a fine summer afternoon, and her master looking as happy as any schoolboy that he was escaping from the botherations of Bedford Row and the smoke of London. Jenny was a favourite mare, which Abernethy had for nearly twenty-five years. She was a great pet, and her excellent qualities had been associated with almost every little excursion of relaxation or pleasure. All things, however, must have an end. At last, the poor animal became affected with a kind of rheumatism, attended with much suffering. After various hesitations, the pain of which those who are fond of animals can very well understand, the order was given that she should be destroyed. This took place in the stables behind Bedford Row. The family were all in one apartment, except Mr. Abernethy, who was heard pacing up and down his private room. A short pause, and the coachman is seen running from the stable to say that Jenny was no more. One of his daughters ran to Mr. Abernethy's room to say, "it is all over, "papa." "Good girl," said he, patting her head, "to come and "tell me so soon." He is said to have suffered greatly on this occasion.

Some years before this, he met with what might have been a serious accident: in stooping forward, his horse threw up his head and struck him a violent blow on the forehead and nose; as Mr. Abernethy first thought, breaking the bones of the latter. He rode up a gateway, and, having dismounted, was endeavouring to adjust the bruise and staunch the blood, when some people ran to assist him, and, as he said, very kindly asked him if they should fetch him a doctor; "but," said Abernethy, "I told them "I thought they had better fetch me a hackney coach," which they accordingly did. He was conveyed home, and in a short time recovered from the accident.

His taking the house at Enfield was probably a prudent measure; he seemed to enjoy it very much, and especially in getting a quiet friend or two down on a Saturday to stay over till the Monday; amongst whom, a very favourite visitor was our respected friend Mr. Clift, of whom we have already spoken. Abernethy had always, however, had what he used aptly enough to term a fidgetty nervous system. From early life he had been annoyed by a particularly irritable heart. The first time he ever suffered materially from it was while he was yet a young man. He had been exceedingly depressed by the death of a patient in whose case he had been much interested, and his heart became alarmingly violent and disordered in its action. He could not sleep at night, and sometimes in the day it would beat so violently as to shake his waistcoat. He was afterwards subject to fugitive returns of this complaint, and few, unless by experience, know how distressing such attacks are.

We suspect that surgeons are more frequently thus affected than is generally supposed. A cold, half-brutal indifference is one thing, but a calm and humane self-possession in many of our duties is another, and, as we saw in Cheselden, not obtained always without some cost; the effects of this sometimes appear only when the causes have ceased to recur, or are forgotten. A lively sensibility to impressions was natural to Abernethy; but this susceptibility had been increased by the well-known influence of the air and excitement of crowded cities on people who are engaged in much mental exertion. His physical organization, easily susceptible of disturbance, did not always shake it off again very readily. At one period he suffered an unusually long time from the consequences of a wound in dissection.

These not uncommon accidents occur perhaps a hundred or a thousand times without being followed by any material results; but, if they happen in disordered conditions of health, either of mind or body, they are sometimes serious affairs, and usually of a more or less active kind—that is, soon terminating in death or recovery. Not so in Abernethy. The complaint went through various phases, so that it was nearly three years, he used to tell us, before he fairly and finally got rid of the effects of it. One of the most difficult things for a man so actively engaged in a profession in London as was Abernethy, is to get the requisite quantity of exercise; whilst the great mental exertion which characterizes a London, as distinguished from almost any other kind of life, requires that the digestive organs should be "up to" pretty good living.

Then, again, Abernethy lived in the days of port wine; when every man had something to say of the sample his hospitality produced of that popular beverage. Abernethy, who was never intemperate, was very hospitable, and always selected the finest port wine he could get, which, as being generally full and powerful, was for him perhaps the least fitted.

Mr. Lloyd, of Fleet Street, who was one of the old-fashioned family wine-merchants, and one of the best men of his day, was the purveyor of his Falernian; never was there a more correct application of nomenclature than that which gave to him the title, by which he was best known, of "Honest John Lloyd." He was one of the kindest-hearted men I ever knew: he had a great regard for Mr. Abernethy; and was treated himself by almost everybody as an intimate friend. One day I went there just as Abernethy had left. "Well," says Mr. Lloyd, "what a "funny man your master is!" "Who?" said I. "Why, Mr. "Abernethy. He has just been here, and paid me for a pipe of "wine; and threw down a handful of notes and pieces of papers "with fees. I wanted him to stop to see if they were right, "'for,' said I, 'some of these fees may be more than you think, "'perhaps.' 'Never mind,' said he; 'I can't stop; you have "'them as I took them,' and hastily went his way."

Sedentary habits, however, as people now begin to find, do not harmonize well with great mental exertion, or constant and anxious occupation. In 1817, Abernethy felt his combined duties as surgeon to the hospital, as lecturer there, and also at the College, becoming too onorous, and therefore in that year resigned the Professorship. On this occasion, the Council sent him the following unanimous expression of their appreciation of his services.

"At the Court of Assistants of the Royal College of Surgeons in "London, holden at the College on the 15th day of July, 1817;

"Resolved unanimously:

"That the thanks of this Court be presented to John "Abernethy, Esq. for the series of Lectures delivered by him in "the theatre of this College, in the years 1814, 1815, 1816, "1817, with distinguished energy and perspicuity, by which he

" has elucidated the physiological and pathological opinions of " John Hunter, explained his design in the formation of the " Hunterian Collection, illustrated the principles of surgery, and " thereby has highly conduced to the improvement of anatomical " and physiological knowledge, the art and science of surgery, " and to the promotion of the honour of the College."

This seems to have gratified him, as, under all circumstances, we can readily understand it might do; and he accordingly replied to it as follows:

" TO THE MASTER, GOVERNORS, AND COUNCIL OF THE ROYAL
" COLLEGE OF SURGEONS.

" Sir and Gentlemen,

" To obtain the good opinion of others, is a universal object " of human actions; and we often strive to acquire it by circuitous and absurd means; but to obtain the approbation of " eminent and judicious characters, by pursuing the direct path " of professional duty, is the most gratifying mode of seeking " and receiving this object of general ambition.

" I have ventured to premise these observations, to show you, " gentlemen, that I do not write inconsiderately, or merely as a " matter of form, when I thus return you my warmest thanks for " the distinguished honour you have conferred on me by your " public approbation of my *endeavours** to discharge the duties " of an arduous office, to which I was elected through your " kindness and confidence.

" I have the honour to remain,
" Sir and Gentlemen,
" Your very grateful and obedient servant,
" JOHN ABERRNETHY."

We insert in this place a letter which he wrote about this time to Sir William Blizard; because it shows two things which are characteristic : the one, how constant he was in not allowing any considerations to interfere with the lectures; and the other, the endurance of his old attachment to Sir William Blizard. It is an apology for not having been present at the Council.

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* Underscored in the original.

" Dear Sir William,

" I was yesterday desired to see a patient residing seven or " eight miles from London. I could not go that day, for it was " lecture evening; I cannot go to-morrow for the same reason; " consequently I must go this evening. I hope you will consider " these circumstances as an apology for my *absence* from the " Board.

" If you cite my example as one misleading future Professors, " be so good as to remember that I retired, leaving the task " which I had undertaken incomplete, wherefore it became neces- " sary to *explain publicly* to an indulgent audience my *motives* " for resigning the Professorship.

" I remain, dear Sir William,
" Yours unremittingly,
" JOHN ABERNETHY."

Abernethy had at various periods of his life been subject to an inflammatory sore throat of a very active kind, which would on some days impede so as almost to prevent his swallowing, and then suddenly terminate in abscess, leaving him perfectly well again. He was young when these sorts of attack began; for in his lectures he used to speak of one of them having subsided only the night before he had some lectures to deliver before the Council of the College, when they were accustomed to meet in the Old Bailey.

As he advanced in life, the disposition to disorder of the digestive organs, which had hitherto shown a tendency to terminate in inflammation of the mucous membrane of the throat, began to affect other structures; and he became teazed and subsequently greatly tortured by rheumatism. The disorder so termed (a kind of general name for various conditions of disorder very different from each other, and which occasionally affect, not only joints, but other structures) is in many cases, as we all know, extremely painful; and is never more excruciating than when muscular parts thus conditioned are affected by spasm. These spasms were a source of much acute suffering to Abernethy. His constant occupations gave him no opportunity of relieving himself from work, except there was that accommodation of indisposition to convenient times, which of course seldom happens.

In the early parts of his life, Abernethy, when he was out of health, would take the first opportunity which his occupations allowed of going a little way into the country; and there, by diet, and amusing himself by reading and exercise, he would soon get well. But as he advanced in life, he was not so ready to attend to himself as perhaps he ought to have been. Besides, he would occasionally do things which incurred unnecessary risks, which we ourselves have sometimes ventured to mention to him.

Living, at the time to which we are now alluding, in Ely Place, and attending his lectures long after we had commenced practice, we frequently walked down with him to lecture; sometimes in the rain, when we used to think his knee-breeches and silk stockings looked most uncomfortable. Besides this, he was very careless about his umbrella; I never recollect him on such occasions calling a coach, and I hardly ever knew him come down to his evening lecture in his carriage. He generally came to the two-o'clock lecture some minutes before the time; and, as he often complained of cold feet, he would stand opposite one of the flue openings in the Museum. One day, I ventured to suggest to him that the transition of temperature to the cold place he occupied in the theatre rendered this hardly prudent, when he said, "Ay!" and moved away. Though temperate, without being very particular in his diet, these other imprudences were unfortunate; because we saw him, every year almost, becoming troubled more and more by his painful visitor. The time, however, was now arriving when he was about to resign the Surgeoncy of the hospital.

We have seen that, when elected to that appointment, he had been no less than twenty-eight years assistant surgeon; he, however, took no pains to indemnify himself for this long and profit-less tenure of a subordinate post; but, mindful of what he had himself suffered, immediately on his appointment he did the best he could at once to provide against others being subjected to such an unrequited service. He accordingly, on his election, addressed a letter to the Governors of the Hospital, of which, when the first edition went to press, we had no copy. As we then stated, our friend, Mr. E. A. Lloyd, a friend and favourite pupil of Abernethy's, had found one, and kindly laid it aside for us; but he unfortunately again mislaid it; and there is no copy of it on the books of the hospital. Subsequently, Mr. Pettigrew has most kindly sent us a volume containing the letter in question. To us it is a very interesting document; but as we had already mentioned the most important fact in it, we have not thought it necessary to reprint the letter. We must not fail to repeat publicly our thanks to Mr. Pettigrew for his kind assistance.

The object of the letter was to recommend some alteration in the arrangement of the duties of the surgeons of the hospital; and, amongst other things, that they should resign at the age of sixty, with a retiring salary. Nothing could, we think, be more just or considerate than such a proposal; and it came very well from Abernethy, who had just stepped into the lucrative appointment. The proposal, however, was not acted upon; and it would appear that his successors, however much they may have at the time approved of the precept, have not been in haste to follow the example. There is little doubt that Abernethy's proposal was as just and considerate of the interests of all parties, as it was in favour of those of science. We cannot think that any one, who considers the whole subject without prejudice, will arrive at any other conclusion.

The absence, however, of any law on the subject, made no difference to Abernethy; he had expressed his own intention of resigning at the age of sixty; and when that time arrived, he accordingly did so. The Governors, however, would not, on that occasion, accept his resignation, but requested him to continue. This he did for about another year, when, in 1827—having been elected in 1815,—he finally resigned the hospital, in the following letter, addressed to the President of the Hospital:

"St. Bartholomew's Hospital,
"July 24, 1827.

"Finding myself incompetent to discharge the duties of surgeon to your Hospital in a satisfactory manner, and having led "my junior to believe that I should resign my office at a certain period of my life, I hereby tender my resignation accordingly. At the same time, I beg leave to assure the Governors "of my gratitude for their appointment to the offices which I have "held under them, and for the good opinion and confidence which "they have manifested towards me. I annex a draft for £100 "for the use of the Hospital.

"I am, dear Sir,
"Your obedient servant,
"JOHN ABERNETHY."

"To Rowland Stephenson, Esq."

At the next meeting of the "Court" of Governors, it was proposed by Dr. Latham, seconded by Mr. Wells, and unanimously resolved:

"That this Court accept, with great regret, the resignation of "Mr. Abernethy as one of its Surgeons, an office which he has "discharged with consummate ability for forty years; and the Court "offers him their best, their most unanimous, and warmest thanks "for his very long and important services."

"July 25, 1827."

There is something significant in this vote of thanks, merging his long period of assistant surgeon in the general expression of his services as surgeon. It is very suggestive of the influence which had been felt from the presence of his master mind, although so long in a position which necessarily restricted its useful energies in regard to hospital matters. We have little doubt that, had Abernethy become surgeon to the hospital at a time of life when his physical energies were unimpaired, he would have suggested many improvements on the system; but, with little real power in this respect, and with men who were opposed to him, he was just the last man in the world to commence a crusade against the opinions of those with whom he was associated. The moment he became surgeon, we see him endeavouring to remove an evil from which he had greatly suffered, and which is obviously a most undesirable state of things; namely, that men should so often arrive at a post in which their active energies are most required, at a time of life when those energies have been, perhaps, necessarily addressed to other objects, have become weary with hope deferred, or already on the wane.

He was, also, very averse to so spacious a portion of the hospital being devoted to the festive meetings of the Governors; and, on showing it, would sometimes go so far as to say—" Ay, " this is what I call the useless portion of the hospital." He continued to lecture another year, when he resigned the lectures; and, in 1829, his appointment at the College of Surgeons also.

In May, 1829, he wrote to Mr. Belfour, the Secretary of the College of Surgeons (whose politeness and attention in facilitating our inquiries at the College we are happy thus publicly to acknowledge), as follows:

" My dear Sir,

" Early in April, the thermometer was above 70°, and I had " so violent a relapse of rheumatism, that I have not been able " (nor am I now able) to leave this place since that time. Apo- " logize to the President, therefore, for my non-attendance on " Monday. *Entre nous:* as I think I shall not be able to perform " the duties of those situations which I now hold at the College, " I think of resigning them; yet I will not decide till I have " talked with Clift* upon it. If he could come down this or the " following Saturday, I should be glad to see him.

" I remain, my dear Sir,
" Yours very sincerely,
" JOHN ABERNETHY."

" Enfield, May 21.
" To Edmund Belfour, Esq."

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* Our excellent Conservator at that time, of whom we have already spoken, and a great favorite of Abernethy's.

He accordingly, in July of 1829, resigned his seat at the Court of Examiners, when the following Memorial was sent him by the Court of Examiners:

"At the College, at the Court holden on Friday, the 17th of "July, 1829:

"Present: Mr. Thomas, President; Mr. Headington, Mr. "Keate, Vice-Presidents; Sir William Blizard, Mr. Lynn, Sir A. "Cooper, Bart., Sir A. Carlisle, Mr. Vincent, and Mr. Guthrie:

"Resolved, that the following Memorial be entered in the "minutes of this Court:

"Conscious of having been enlightened by the scientific la-"bours of Mr. Abernethy; convinced that teachers of anatomy, "physiology, and of surgery (and consequently their pupils), "have derived most important information from these sources of "knowledge; and impressed that the healing art has been emi-"nently advanced by the writings of that excellent individual; "the Members of the Court of Examiners lament the tendered "resignation of an associate so endowed, and whose conduct in "the Court has always been so exemplary.

"Resolved also, that a copy of the foregoing Memorial be "delivered by the Secretary to Mr. Abernethy."

He had by this time become a great sufferer—walked very lamely; and this difficulty, interfering more than ever with his exercise, no doubt tended to make matters worse. He consulted nobody, I believe, but his old friend Dr. Roberts, of St. Bartholomew's. He was induced to go for some time into the country; and on his return, hearing that he was again in Bedford Row, and not having seen him for some time, I called on him one morning, about eleven o'clock.

I knew that he had been very ill; but I was not in the least prepared to see him so altered. When I was shown into his room, I was so struck with his appearance, that it was with difficulty I concealed the emotion it occasioned; but I felt happy in observing that I had succeeded.

He appeared, all at once as it were, to have become a very old man; he was much thinner; his features appeared shrunk. He had always before worn a good deal of powder; but his hair, which used to hang rather thickly over his ears, was now thin, and, as it appeared to me, silvered by age and suffering.

There was the same expressive eye which I had so often seen lit up by mirth or humour, or animated by some more impassioned feeling, looking as penetrating and intellectual as ever, but with a calmness and languor which seemed to tell of continued pain, and which I had never seen before. He was sitting at a table, on a sort of stool, as it appeared to me, and had been seeing patients, and there were still several waiting to see him. On asking him how he was, his reply was very striking.

It was indeed the same voice which I had so often listened to with pleasure; but the tone was exceedingly changed. It was the subdued character which is expressive of recent suffering, and sounded to me most mournfully. "Ay," say he, "this is very "kind of you—very kind indeed!" And he somewhat distressed me by repeating this several times, so that I hardly knew what to reply. He said he was better, and that he could now walk pretty fairly again, "as," said he, "you shall see."

He acordingly slowly dismounted from his seat, and, with the aid of two sticks, began to walk; but it was a melancholy sight to me. I had never seen him nearly so lame before.

I asked him what he was going to do. He said he was going to Enfield on the morrow, and that he did not think he should return. I suggested that he might possibly try a drier air with more advantage; that I feared Enfield might be a little low and damp, and not, possibly, the best place for him. "Well," he said, "anything is better than this." I very shortly after took my leave; not sorry to be again alone; for I felt considerably depressed by the unexpected impressions I had received from this interview. It was too plain that his powers were rapidly waning. He went to Enfield on the following day (a Wednesday, I think), and never returned again to practice. He lingered about another year, during which time I once went to see him, when I found him something better. He was able to see his friends occasionally, and at times seemed to rally. In the spring, however, of 1831, he gradually got weaker, and died on the 20th of April in that year.

He perfectly retained his consciousness to the last, and died as tranquilly as possible. In exhausted conditions of the body, persons will sometimes linger much longer than the medical attendant had considered possible; in other cases, the flickering lamp becomes extinguished many days before they had been apprehensive of immediate danger. The latter was the case with Mr. Abernethy. Dr. Roberts had just been to see him; and the family, who scarcely ever left him, had followed the Doctor down into the dining room, anxious to hear his report. This, although it gave them no hope as to the ultimate result, expressed no apprehension of immediate danger. On returning to Mr. Abernethy, but a few minutes had elapsed when he gently laid his head back and expired; but with such entire absence of any struggle, alteration of countenance, or other indication, that for a short time it was difficult to realize the fact that he was no more. His body was not examined; but, from the history and symptoms of his case, there could be little doubt that there would have been found organic changes, in which the valvular structures of the heart had more or less participated.

He was buried in the parish church of Enfield. The funeral was a private one; and there is a plain tablet on the wall over his vault, with the following inscription:

H. S. E.

JOHANNES ABERNETHY, R. S. S.
REGII CHIRURGORUM COLLEGII QUONDAM PRÆSES,
QUI INGENIO, PROBITATE, BENIGNITATE
EXIMIE PRÆDITUS
ARTEM MEDICAM PER ANNOS PLURIMOS,
SUMMA CUM DILIGENTIA, SOLERTIA, FELICITATE
COLUIT, EXERCUIT, DOCUIT, AUXIT,
ET SCRIPTIS HOC MARMORE PERENNIORIBUS
POSTERITATI TRADIDIT,

MORBO DEMUM GRAVISSIMO CONFECTUS
CUJUS ANGORES HAUD ALITER DOMANDOS
PIO ET CONSTANTI ANIMO SUBEGIT.
CONJUGI, LIBERIS, AMICIS, DISCIPULIS,
HUMANO GENERI, CUI TANTOPERE SUCCURRERAT
FLEBILIS,
APRILIS DIE 20, A. D. 1831, ÆTATIS SUÆ 67.
PLACIDE IN CHRISTO OBDORMIVIT.

CHAPTER XXXIV.

"It is as much commendation as any man can bear, to own him excellent; all beyond it is idolatry."—DRYDEN.

IT has been stated by an acute observer that it was impossible for any man to be with Abernethy, even for a short time, without feeling that he was in communion with no common mind; and it was just, I think, the first effect he produced. In person, he was of middle stature, and well proportioned for strength and activity. He had a most interesting countenance; it combined the character of a philosopher and a philanthropist, lighted up by cheerfulness and humour. It was not that his features were particularly well formed or handsome, though there was not a bad one in the whole countenance; but the harmony of composition (if we may be allowed the expression) was so perfect.

A sufficiently high and ample forehead towered over two of the most observant and expressive eyes I almost ever saw. People differ about colour; they appeared to me always of a greyish-blue, and were characterized as the rule by a mirthful yet piercing expression, from which an overlaying of benevolence was seldom wanting; yet, as we have before observed, they would sometimes launch forth gleams of humour, anger, or pathos, as the case might be, which were such as the term dramatic can alone convey.

There was another expression of his eye which was very characteristic; it was when his benevolence was excited without the means of gratifying it, as would sometimes happen in the case of hospital patients, for whom he wanted good air, and things which their position did not allow them to procure. He would in this case step a pace or two from the bed, throw his head a little aside, and, talking to the dresser, exhibit an expression of deep feeling which was extremely peculiar; it was a mixture of suffering, of impatience, and sympathy; but the force which the scene drew from the dramatic character of his expressive countenance is entirely lost in the mere relation. If, at such times, he gave utterance to a few words, they were always extremely touching and expressive. On an occasion, for example, like the following, these characters were combined. A woman came into the hospital to have an operation performed; and Abernethy, as was his invariable custom, took some time to get her health into a more favourable condition. When the day for the operation was at hand, the dresser informed him that she was about to quit the hospital.

"Why, my good woman," said Abernethy, "what a fool you "must be to come here to have an operation performed; and "now, just as you are in a fit state for it, to go out again." Somebody here whispered to him that her father in the country "was dying." With a burst of indignation, his eyes flashing fire, he turned to the dresser, and said: "You fool, why did you not "tell me this before?" Then, after a moment or two looking at the patient, he went from the foot up to the side of the bed, and said in the kindest tone possible: "Yes, my good woman, you "shall go out immediately; you may come back again when you "please, and I will take all the care I can of you."

Now there was nothing in all this, perhaps; but his manner gave it immense force. And I remember one of the old pupils saying to me: "How kind he was to that woman; upon my "soul, I could hardly help crying."

Abernethy exemplified a very rare and powerful combination of intellectual qualities. He had a perception of the facts of a subject at once rapid, penetrating, and comprehensive, and a power of analysis which immediately elicited those relations which were most important to the immediate objects of the investigation; a power, of course, of the utmost value in a practical profession.

This faculty was never more marvellously dipslayed than sometimes in doubtful or difficult cases; and this had been always a striking excellence in him, even when a young man. I recollect hearing my father say, that to see Abernethy to advantage, you must observe him when roused by some difficulty, and in a case where other men were at fault, or puzzled. It was just so; his penetrating mind seemed to remove to either side at once what was foreign or doubtful, and go straight to the point with which alone he had to grapple. Allied to this, if not part of it, was that suggestive power which he possessed in so remarkable a degree, and which by a kind of intuition seemed to single out those pertinent relations and inquiries which the judgment is to examine, and reject, or approve, as the case may be; a faculty absolutely necessary to success in endeavours at extending the boundaries of a science. He was thus sometimes enabled, as has been shown, to convert facts to the highest purposes, in aid of practical improvement, which, with an ordinary observer, would have passed unnoticed.

These qualities, combined with a memory, as we have seen, peculiarly ready, capacious, and retentive, placed his resources at once at hand for practical application. Then, while his quick perception of relation always supplied him with abundant analogies, his imaginative faculty enabled him to illustrate, enforce, and adorn them with such a multitude and variety of illustration as seemed well-nigh inexhaustible.

Of his humour we have already spoken; but the same properties which served him so well in more important matters were really, as it appears to us, the foundation of much of that humour by which his conversation was characterized—we mean his quick perception of relation, and his marvellously retentive memory. Many of the things that he said, "told," not because they were original, so much as that they were ready at hand; not because they were intrinsically good, as so apposite in application; and, lastly, because they were further assisted by his inimitable manner. Nevertheless, sometimes his quick perception would be characterized by a corresponding felicity of expression. Bartleman was an intimate friend of Abernethy's; and those who remember the magnificent voice and peculiarly chaste style of that celebrated singer, will appreciate the felicity of the expression applied to him by Abernethy, when he said, "Bartleman is an "orator in music."

Abernethy had the talent of conveying, by his manner, and apparently without the smallest effort, that which in the drama is scarcely known but as the result of constant and careful study. It was a manner which no analysis of his character can convey, of which none of his own compositions even give an adequate idea. The finest colours are often the most fugitive. This is just the case with that heightened expression which we term dramatic. Who can express in words the thrilling effect that an earnest, heartfull delivery of a single phrase has sometimes conveyed. But brilliant as these endowments were, they were graced by moral qualities of the first order.

Quick as he was to see everything, he was necessarily rapid in his perception of character, and would sometimes at a glance hit on the leading influence of this always difficult assemblage of phenomena, with the same rapidity that marked his dealings with facts which were the more usual objects of his inquiries. But, though quick in his perception of character, and therefore rapidly detective of faults, his views were always tempered by generosity and good sense. Indignant at injustice and oppression, and intolerant only of baseness or cruelty, he was kind and charitable in his construction of more common or excusable failings.

He loved man as his brother, and, with enlarged ideas of the duties of benevolence, never dispensed it as a gift which it was creditable to bestow, so much as an obligation which it would have been immoral to have omitted. It was not that he did anything which the world calls noble or great in giving sums of money to this or that person. There were, indeed, plenty of instances of that sort of generosity and benevolence, which would creep out, in spite of him, from those whom he had benefited; and no man knew how to do it better. A gentleman, for example, came up from the country to the school, and went to Bedford Row, to enter the lectures. Abernethy asked him a few questions about his intentions and his prospects, and found that his proceedings would be little doubtful, as they were contingent on the receipt of some funds which were uncertain.

Abernethy gave him a perpetual ticket to all his own lectures. "And what made so much impression on me," said the gentleman, "was, that instead of paying me less attention, in asking me to "his house, than the other pupils, if there were any difference, "he paid me rather more." We have seen this gentleman within a few days, and we are happy to say he has had a happy and prosperous career.

The benevolence, however, to which we allude, was not merely shown in giving or remitting money; that, indeed, would be a marvellous overcoming of the world with many people, but not with Abernethy; his benevolence was no fitful suggestion of impulse, but a steadily glowing principle of action, never obtrusive, but always ready when required. It has been said, "a good man's "life is a constant prayer." It may be asserted that a good surgeon's life should be a gentle stream of benevolent sympathies, supporting and distributing the conscientious administration of the duties of his profession. That this really intrinsic part of his character should have been occasionally overlaid by unkindness of manner, is, indeed, much to be regretted; and, we believe, was subsequently deplored by no one more sincerely than himself, and those who most loved and respected him. The faults of ordinary acquaintances are taken as matters of course; but the errors of those who are the objects of our respect and affection, are always distressing. We feel them almost as a personal wrong; and, in a character like Abernethy, where every spot on so fair a surface became luminously evident, such defects gave one a feeling of mortification which was at once humiliating and oppressive. But, whilst we are the last to conceal his failings, we cannot but think he was, after all, himself the greatest sufferer; we have no doubt they originated, at least, in good motives, and that they have been charged, after all, with much good.

Unfortunately, we have at all times had too many Gnathos in our profession, too much of the

> " Quidquid dicunt laudo, id rursum si negant, laudo id quoque.
> Negat quis? nego. ait? aio."

These assenting flatterers are the bane of an honest man, and, under the name of tact and the influence of an uncompromising ambition to get on, merge the highest duties into a mere desire to please; and, adopting the creed of Gnatho, appropriately arrive at the same climax as their conclusion:

> "Postremo imperavi egomet mihi
> Omnia assentari."

Now, Abernethy knew this well, and detested it with a repulsion deep and sincere. He had no knowledge of Gnathonics. He felt that he was called on to practise a profession, the legitimate object of which was alone achieved when it ministered to real suffering; and that mere assentation to please patients was a prostitution of the highest qualities of mind to the lowest purposes. If one may so say, he felt like a painter who has a feeling for the highest department of his art, and who could see nothing in an assenting Gnathonicism but an immoral daub.

Neither was this without use to others; for though he looked, as the public may be assured many others have done, on a "parcel of people who came to him with nothing the matter," yet even in his roughness he was discriminate, and sometimes accomplished more good than the most successful time-server by all his lubricity. One day, for example, a lady took her daughter, evidently most tightly laced—a practice which we believe mothers now are aware is mischievous, but scarcely to the extent known to medical men. She complained of Abernethy's rudeness to her, as well she might; still he gave her, in a few words, a useful lesson. "Why, "madam," said he, "do you know there are upwards of thirty yards "of bowels squeezed underneath that girdle of your daughter's? "Go home and cut it, let Nature have fair play, and you will "have no need of my advice."

But, if we must acknowledge and regret, as we do, his occasional rudenesses of manner, let us also give him the credit of overcoming these besetting impulses. In all hospitals, of course, there are occasional vexations; but who ever saw Abernethy really unkind to a hospital patient? Now, we cannot affirm any thing beyond our own experience. We had, as dresser, for a considerable period, the care of many of his patients, and we continued frequently to observe his practice from the commencement of our pupilage, which was about a year or a little more after his appointment as surgeon, until the close of his hospital labours. We speak subject to correction, therefore, but we cannot charge our memory with a single instance of unkindness to a hospital patient; whilst we are deeply impressed by the constant prevalence of a generally kind and unaffected sympathy with them.

The quickness with which he observed any imperfection in the execution of his directions, was, on the contrary, the source of many a "rowing," as we apprehend some of his dressers well enough remember; whilst he seldom took a dresser without making more than usual inquiries as to his competency. In private practice, also, any case that really required skill and discrimination was pretty sure to meet with the attention that it deserved. This was noticed in the remarks made on the character of Abernethy, at the time of his death, by the Duke of Sussex, at the Royal Society, at their anniversary meeting on the 30th of November, 1831, of which the following is a report, copied from the books of the Society:

His Royal Highness observed that "Mr. Abernethy was one "of those pupils of John Hunter who appears the most com"pletely to have caught the bold and philosophical spirit of his "great master. He was the author of various works and "memoirs upon physiological and anatomical or surgical subjects, "including papers which have appeared in our Transactions. "Few persons have contributed more abundantly to the esta"blishment of the true principles of surgery and medical science "in those cases which require that minute criticism of the "symptoms of disease, upon the proper knowledge and study of "which the perfection of medical art must mainly depend.

"As a lecturer, he was not less distinguished than as an "author; and he appears to have attained the art of fixing "strongly the attention of his hearers, not less by the just "authority of his opinions than by his ready command of apt "and forcible illustrations. He enjoyed, during many years of "his life, more than an ordinary share of public favour in the "practice of his profession; and, though not a little remarkable

" for the eccentricities of his manner and an affected roughness " in his intercourse with his ordinary patients, he was generally " kind and courteous in those cases which required the full ex- " ercise of his skill and knowledge, and also liberal in the " extreme when the infliction of poverty was superadded to those " of disease."

The high character of his benevolence was shown also in the ready forgiveness of injuries; and he was as grateful as he was forgiving. How constant his attachment to his early friend and teacher, Sir William Blizard. There is something very characteristic of this, when, in the decline of life, he writes "Yours unremittingly," to one whose unusually lengthened years had enabled him to witness Abernethy's entry into life, and, at the conclusion of the labours of his distinguished pupil, to join with a public body in expressing the high sense entertained of the obligations which he had conferred on science and mankind. Few men could have been placed in positions more trying than that in which he found himself in his controversy with Mr. Lawrence. When the time arrived at which, in the ordinary course, that gentleman would have been elected into the Council of the College, there was a very strong feeling on the part of some of the members against his admission. Abernethy, however, proposed him himself, and it was by his casting vote that the election terminated in Mr. Lawrence's favour.

A member of the Council having expressed his surprise that Mr. Abernethy should propose a gentleman with whom he had had so unpleasant a difference—" What has that to do with it?" rejoined Abernethy. Some friends of Mr. Lawrence wished to pay that gentleman the compliment of having his portrait drawn, and a subscription was to be entered into for this purpose. It was suggested that it would be very desirable to get Mr. Abernethy to allow his name to be in the list; and our friend, Mr. Kingdon*, with the best intentions no doubt, ventured to ask

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* An old and respected pupil of Abernethy's, whose merits, as an excellent man and kind-hearted professional brother, we are happy thus publicly to acknowledge.

Mr. Abernethy to put his name at *the head* of the list. But there was nothing of Quixotism in Abernethy. He would have been very glad to do a kind thing to anybody; and any obstacle affecting him personally was much more likely to be an argument in favour than otherwise. He liked justice for its own sake; but he was circumspect as well as penetrative. At first he seemed inclined to do it, but asked a day to consider of it; and then wrote the following letter, into a more particular examination of which we need not enter:

"1828—9.

"My dear sir,

"'*Fiat Justitia*' is, as I flatter myself, the rule of my con- " duct. At all times have I expressed my approbation and " respect for William Lawrence, on account of his professional " learning, and of his ability as a writer and public speaker. " But, if I do what you would have me, I should do much more, " and be made to appear as a leader in a scheme the object of " which is indefinite; so that persons will be at liberty to put " what construction they please upon my conduct. Being " desirous of doing what you wish, I have been for some time " in a state of perplexity and hesitation.

"At length I have resolved—that since I cannot determine " what ought to be done—to follow a useful rule of professional " conduct, and to do nothing. Vexed to refuse you anything, I " hope you will still believe me,

"My dear sir,
"Your obliged and very sincere friend,
"JOHN ABERNETHY."

The question of how far letters are to be relied on as expositions of character, has been much discussed.

The remarks of Dr. Johnson on the subject, in his Life of Pope, are put with great force, and almost carry us with him; but, on reflection, they appear too general; they do not, perhaps, get close enough to the question in which the student in Biography is chiefly interested.

Although letters obviously afford opportunities for a variety of affectation—and Pope seems to have seldom been quite natural—yet we cannot think that "friendship has no tendency to pro-"duce veracity." But it seems impossible to generalize on the subject. We might as well ask whether oral evidence is to be relied on. There is no one quality that we can think of that can be said to be so universally distributed in letters as to be safe to generalize on. Common sense tells us that the testimony they give may be false or true. They are, like witnesses, capable of telling truth, but having, under different circumstances, all the characters of all other kinds of witnesses. Strictly, the dependence one would place on them would be on the abstract probability of that which they suggest; or as supported by any corroborative evidence.

The following is a note to his daughter, the late Mrs. Warburton, thanking her for a watch-chain:

"Bedford Row,
"Sept. 30.

"My dear Anne,

"I am quite accablé by the liberality of the Dr. and yourself; "but I've been thinking that the Dr. is leading me into temp-"tation, and that you are spending your money for an ornament "which will never be seen, and which will only increase my "apprehensions of having my pocket picked. However, what is "meant in kindness should be received according to its design. "Thus occasionally shall I taste the old rum; though, according "to the phrase of the Doctor's schoolfellow (who reiterated that "the wine was capital), blue ruin might have done as well. Thus "also shall I wear the chain in remembrance of a chain which "attaches me to you; one forged by Nature, and riveted by your "good conduct and excellent disposition.

"I am, my dear Anne,
"Your affectionate and attached
"JOHN ABERNETHY."

TO MRS. ABERNETHY.

" My dear Anne,

" Sir James, becoming a Governor, observed, he could not be " both master and servant, and therefore *must* relinquish his " labours. I was three hours going round the hospital for the " first time. It is Sir James's taking-in day on Thursday. The " admitted patients must be seen on Friday. I cannot leave " town until Saturday, unless Mrs. A.* pleases to encounter the " chance of sleeping on the road. I suppose she will have luggage; and I cannot in reason allow less than seven hours, with " a rest of two to Miss Jenny, with such additional weight.

" I wish you had seen Dr. Powell; not that I believe he " could do aught more than your own reason would suggest, or " else you should never, with my good-will, have gone to Southend. " I know nought of ——— Could you not return by water? " By engaging a suitable vessel, the whole party might then be " transported—ay, even to Putney. I should think ten or twelve " pounds well bestowed on such a desideratum. Do not think of " expense; for money cannot be put in competition with your " welfare. If you are healthy and long-lived, I should be surprised if the children were not good and prosperous. I say " nothing about myself, because I am no Professor, although they " so nickname me.

" Yours in all events,

" JOHN ABERNETHY."

The following has some points of interest. The reason why merciful; the observance of approved custom in shutting up the house; yet connecting so much of " forms, modes, shows of grief," as Hamlet calls them, with the best feelings, because " she had loved you," &c.; the gentle tenderness with which he alludes to the excellence of the Mother; and the graceful compliment with which he concludes; seem excellent teaching.

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* Mrs. James Abernethy.

" My dear Anne,

" I am much concerned to tell you that your Grandmother " died last night, about nine o'clock. Death came to her unat- " tended with pain or terrors. It is highly probable that she " neither felt uneasiness of body or mind, from the time she was " first seized with the fit. To have lived to her age, respectably " and respected, in health, and to die without bodily or mental " sufferings, is a fate which falls but to the lot of few; so that " her friends have no reason to repine at her death; and it seems " to be a merciful dispensation of Providence. If the servant " has left Putney for Radcliff, of course the house is shut up; if " not, it ought to be so. You and the children ought also to " stay within doors, and have the front windows closed. She " loved you all very much, and you ought to love and respect her " memory. To you, who are apt to indulge your feelings too " much, I must add, that it would be wrong to grieve much for " what is in reality, as I have said, a cause to rejoice. I mean " that the pains and decrepitude of age should be spared to the " Individual whose fate we mourn. I have always esteemed it " an excellence in your Mother's character, that though she feels " acutely, yet she bears her lot in the dispensations of Providence " with a gentleness and submission which indeed serve to dimi- " nish their severity. I trust she will do so on this occasion. " You will see her to-morrow at Putney, if not before. On all " occasions, and under every circumstance, rely on it that I " remain

" Most affectionately your's,
" JOHN ABERNETHY."

" Bedford Row,
" Friday Morning, August, 1812."

TO MRS. ABERNETHY.

" Dearest,

" The first incident worth relating happened at Cirencester. " I hobbled in haste to Mr. Lawrence's; his dressing room was " open, and articles of apparel, &c. lay about, as if he had been

" lately engaged in the (to some agreeable, to others annoying) " operation of dressing himself. His maid servant, however, " sought him in vain, even in the church-yard. She looked " mysterious and alarmed. 'Perhaps,' said I, 'he is gone to Mr. " 'Warner's.' Sure enough there he was, examining a shoulder " said to have been dislocated; and he would make me examine " it likewise. So much time having been lost as to the object of " my visit, I had merely time to tell him that you were at Chel- " tenham, and would come to see him; and he to tell me that " Mrs. Lawrence was at Malvern. The guard sounded his tin " horn in an imperative manner; the sound was repeated, and I " received a verbal reproof from the coachman for not instantly " obeying the summons. A little way out of Cirencester, on the " road to Tetbury, there is a neat and stile-ish house and grounds " which I anticipated belonged to Charles Lawrence; and my " presentiment was confirmed by a Compagnon de Voyage. Ar- " rived at the York House, Bath, I was shown into a bed-room " which had not been dusted, as you would think, properly since " a fortnight before the fire. So, with the fear of bugs and other " blood-sucking insects, I took up those of the papilionacious " tribe belonging to Mr. Marriott, and proceeded to his abode; " approaching which, I encountered Mr. Wood. By his recom- " mendation, I procured apartments in a house, as Bourdillon " would say, the entirety of which could only be obtained by " persons in general. Behold me, then, sole occupant of a spa- " cious and well-furnished house (being No. 9, St. James's Square), " with a garden terminating in a road, beyond which fields only " are visible, and within ken of the brow of Lansdown. The " front and back rooms communicate, and the windows of each " being open, there is perflation in excess. (Diary.) Monday. " Descending Gay Street, in my way to the bath, I called at " Soden's, and found him in great distress, and that Hodgson " had gone forth to seek for me. Mrs. Soden is very ill, and " Hodgson had come once to see her. She has lots of medical " attendants, who, to use ——'s phrase, dovetail their opinions " and practice before they prescribe for their patient. In peram- " bulating Bath with Mr. Hodgson, we encountered Mr. Leif-

"child, who recited his case to the former, in proof of the efficacy "of diet, with the eloquence of a public orator; and it happened "to be a case in point. I scrubbed myself for half an hour, and "drank half a pint of water at the pump room; then reascended "the hill; looked in at Wilson Brown's, whose wife is quite well. "No doubt the state of her digestive organs was the source of "her various maladies. Her father, Dr. Chichester, whom you "saw at Mr. Acres', now resides at Cheltenham. I went with "Mr. Brown to the Riding School, thinking that if I could meet "with a kind of shooting pony, I might be tempted to get on "his back. But I escaped temptation, dined on mutton chop or "chops, drank half a pint of ale, felt quiet, dosed a little. Descended to Queen Square; left a card for Sir George Gibbs, who "is at Weymouth; called on Mr. Gore, who had been called out "to a casualty (Bath phrase); went to the White Hart, found "the coach did not come in until nine o'clock; thinking that "if I did not see Mr. Battiscombe until then, we should both be "as weary of seeing each other as of the day's toil, I reascended "the hill, and went to bed. It was necessary that a day should "elapse, that I might tell you how time passed; so that I have "complied with your request of writing as soon as possible. No "doubt that the days will be so monotonous as to render a second "account unnecessary. I calculate I shall be tout-à-fait ennuyé "in a fortnight; so that I expect I shall set off to Cheltenham, "in the coach I came by, next Monday sennight, which I believe "will arrive there about eight or nine in the evening, when I hope "to find you all well. On Friday I think we might visit Oxford, "and house ourselves again at the Angel; from whence, if we "start at nine, we may be in London by four o'clock on Saturday.

"I think I have written a ladylike letter: no attempt at condensation. I hope to hear from you in return, and that you "will be able to say all's well. I will write to Anne to-morrow, "because you say she wishes it—perhaps to-day.

"Love to Miss Moggy and Miss Madge.

"Yours for ever and for aye,

"John Abernethy."

"Bath, 8th September, 1828."

He was fond of joining in anything that could delight and amuse his children. In summer, when he returned home, the "upstairs bell" was generally the signal for the young people to come to have a game of play. Of games, battledore and shuttlecock was a favourite, at which he was as expert and pleased as any of them. Sometimes there would be a petition for stories; and he would delight them all by little histories or tales, in which he appears to have shown the same talent as he did in his lectures. The same stories were often repeated, yet they always had something of the fun or freshness, as the case might be, of things that were heard for the first time. One Christmas, the family, desirous of amusing some friends, proposed to get up some private theatricals. The anxious question being, what papa would say to it? Well, this was very soon known, by a ready assent. But what was the play to be? They replied, "The Iron Chest." But now rather an important difficulty arose, of who was to take the part of Sir Edward Mortimer? This was as unexpectedly as joyfully solved, by Mr. Abernethy taking it himself.

But, of all the home sports to which he seems to have given such zest, all yielded to the superior attractions of the Magic lantern. This was generally a gambol reserved for Christmas, when the whole establishment were admitted. The fun lay in the number and variety of the stories and remarks which accompanied the optical illustrations.

Every "slide" had remarks and stories made off-hand, which, as stories were of this or that kind, either greatly increased the interest or were the occasion of hearty merriment or peals of laughter.

He was very fond of the country and his garden, and nothing he enjoyed more than driving down to Enfield with Mr. Clift, and having a holiday. On such occasions, sometimes, even before he went into the house he would set to work in the garden. They used both to be very active in cutting out the dead wood from the laurels and other shrubs. In these domestic operations the children would assist without any of the party recollecting that bonnets and gowns were not the best costume for making way amongst the trees and shrubs, which, however, only assisted to increase the fun and excitement. At other times, there would be an expedition against the duck-weed on the water. In short, he always seems to have been the life of the party, and to have invested even the most ordinary occupations with liveliness and interest, for which he was certainly gifted with unwonted powers. Occasionally he would go to the theatre, which he sometimes enjoyed very much. Like his brother, he was a great lover of our immortal Shakspeare, and scarcely less familiar with most of the wonderful creations of his mighty genius.

When we contemplate Abernethy in a single phase only of his character, we see a "fidgetty" physical organization, influencing an habitual irritability of which it was too much a supporter, if it were not the original cause; but the moment we penetrate this thin and only occasional covering, we meet with nothing but rare and splendid endowments; and, as we proceed in our examination, we are at a loss which most to admire, the brilliant qualities of his intellect, or the moral excellences of his heart.

But, in estimating the one or the other, we must view them in relation to the other feelings with which they were accompanied, as impeding or assisting their development and application; or otherwise we shall hardly estimate in its due force the powers of that volition over which the moral sense so constantly presides.

Abernethy had considerable love of approbation—a quality which, regarded in a religious point of view, may be said to embrace all others; but it is one which, in the ordinary relations of life, is apt to dilute the character, bringing down the mind from the contemplation of more elevated motives to the level of those suggested by worldly considerations and conventionalisms. To one shy, even to timidity, and whose organization fitted him rather for the rapid movements of a penetrative and impulsive perception, than the more dogged perseverance of sustained labour, love of approbation, even in the ordinary application of it, might have been a useful stimulus in maintaining exertion; and we believe it was. Yet, though he avowed it as a dominant principle in our nature, as the great "incentive" to human action, he never sought it but by legitimate channels; nor, potential as its influences might have been, when sharpened by shyness and timidity, did he hesitate one moment to throw them all aside whenever the interests of truth or justice rendered it necessary.

When Mr. Hunter's views were little noticed, less understood, and apparently in danger of being forgotten—when the more speculative of his views were not even known as his by any *published* documents—when, therefore, in addition to other objections, he was, as we have seen, subjected to the imputation of advocating opinions as Hunter's, of which there was no other testimony than the precarious memories of contemporaries,—he stood boldly forward as the fearless, earnest, and eloquent advocate of John Hunter. In this case, he overcome his natural dislike to contest and publicity, and encountered just that individualizing opposition which is most trying to a sensitive organization; exemplifying a rare tribute of truth and justice paid by genius to the claims of a departed brother. At the same time, the power he displayed of moulding views, scarcely even acknowledged, into the elementary beginnings of little less than a new science, strikingly testifies the superiority of his intellectual power.

Whilst, however, he advocated John Hunter's views, and, with a creative spirit, made them the basis of additional structures which were emphatically his own, we find him modestly reverting again and again to John Hunter, as if afraid of not awarding him his just due,—and for ever linking both the early bud put forth by Hunter's inquiries and the opening blossom afforded by his own, with the imperishable efforts of his distinguished master,—exemplifying the modesty of genius, and how superior it is, when guided by virtue, to any but the most exalted motives.

Another example of his independence of mind and of his conquest over difficulty, when the interests of truth appeared to him to render it necessary, was the manner in which, in defiance of ridicule and all sorts of opposition, he advocated his own views; with ultimate success, it is true, but obtained only through a variety of difficulties, greatly augmented by his naturally shy, if not timid, organization. Still, amidst all his brilliant endowments, we feel ourselves fondly reverting to the more peaceful and unobstrusive efforts with which he daily inculcated the conscientious study of an important profession.

That he had faults, is of course true; but they were not the faults of the spirit so much as of the clay-bound tenement in which it resided—not so much those of the individual man as those necessarily allied to humanity. The powerful influences of education had not been very happily applied in Abernethy; its legitimate office is, no doubt, to educe the good, and suppress the evolution of bad qualities. In Abernethy, we can hardly help thinking that his education was more calculated to do just the contrary. "To level a boy with the earth," because he ventured on "a crib to Greek Testament," is, to say the least of it, very questionable discipline for a shy and irritable organization. To restore to its original form the tree which has been bent as a sapling, is always difficult or impossible.

But, in virtue of those beneficent laws which "shelter the shorn lamb," Abernethy was allowed ultimately, less in consequence than in spite of his education, to develop one of the most benevolent of dispositions. To this was joined a powerful conscientiousness, which pervaded everything he did, and which could hardly be supported but by sentiments of religious responsibility; and it is certain that his mind was deeply imbued with the precepts of a vital Christianity, that took the most practical view of his duty to God and to his neighbour; and, in the very imperfect sense in which human nature has ever attained to the full obedience of either, he regarded a humble and practical observance of the one as the best human exposition of the other. His favourite apothegm on all serious occasions, and especially in those parts of his profession where its guidance was most required, was the divine precept of doing to others as we would wish done to ourselves.

In his reflections he strikingly exemplifies how humble and single-minded were his modes of thinking. After the manner of Bishop Butler, but with a simplicity highly characteristic, he identifies that which is truly religious with that which is truly philosophical; and, instead of finding difficulties in those barriers which necessarily lie before finite capacities, when endeavouring to approach the Infinite, he seems to regard them as things which rather direct and limit, than obstruct, legitimate inquiry.

In concluding this imperfect sketch of a difficult character, we have merely endeavoured to state our own impressions. We cannot help thinking that Abernethy has left a space which yet remains unoccupied; it would be presumptuous to say that it will long continue so. In his life he has left us an excellent example to follow, nor has it been less useful in teaching us that which we should avoid.

Whilst amongst us, as he taught us how to exercise some important duty, he would occasionally endeavour to impress matters of detail, by showing, first, how they should not be done. His life instructs us after the same manner. In all serious matters, we may generally take him as a guide; in occasional habits, we may most safely recollect that faults are no less faults—as Mirabeau said of Frederick—because they have the "shadow" of a great name; and we believe that, were it possible, no good man would desire to leave a better expiation of any weakness, than that it should deter others from a similar error. This is the view we would wish our young friends to take of the matter. We cannot all reach the genius of Abernethy, but we may be animated by the same spirit.

If great men are endowed with powers given only to the few, their success generally turns on the steady observance of the more homely qualities which are the common privilege of the many—caution, circumspection, industry, and humility. Again, genius is often charged with weaknesses by which more ordinary minds are unfettered or unembarrassed. We may emulate the justice, the independence of mind, the humanity, the generosity, the modesty, and, above all, the conscientiousness of Abernethy, in all serious cases; without withholding from the more ordinary and lighter duties of our profession a due proportion of these feelings, or necessarily laying aside the forbearance and courtesy which must ever lend an additional grace to our various duties.

We may endeavour with all our power to avoid a disgraceful flattery and compliancy, without replacing them by contrasts which, though not equally mischievous, we may be assured are equally unnecessary: whilst we may, in our various stations, emulate his kindness, his constancy as a husband, father, and friend; and yet not refuse a becoming share of such endearing qualities to others, from any fear that we shall be subject to misconstruction.

We may remember that intellect alone is dry, cold, and calculating; that feeling, unsupported or uncontrolled, is impulsive, paroxysmal, and misleading; and that the few rare moments of moral excellence which human nature achieves, are, when these powers combine, in harmony of purpose and unity of action.

We may be assured that, however much we admire that rapid and searching perceptivity,—that sound, acute, and comprehensive judgment which Abernethy brought to bear on the study of the profession,—or the honourable, independent, generous, and humane manner in which he administered its more important and serious duties,—the greatest, and, for good, the most potential influence of all, was the manner in which he employed his manifold and varied excellences as a teacher in endeavouring to infuse a truly conscientious spirit into the numbers who, as pupils, he sent forth to practise in all parts of the world. This is still an unknown amount of obligation. Those resulting from his works may be proximately calculated, and such as are necessarily omitted in a review essentially popular, *may be chronicled hereafter in a more suitable manner;* but, as a teacher, we cannot as yet calculate the amount of our obligations to him. They are only to be estimated by reflection; and by recollecting the *moral influence of every man* who honestly practises an important profession.

Finally, whether we think of the interests of the public, the profession, or those of each, as affecting the other, or of both as affecting the progress of society; we shall, I think, be disposed to agree with one of our most distinguished modern writers, that the "means on which the interests and prospects of society most "depend, are the sustained influence that invariably attends the "dignity of private virtue."

In a world which presents so much of violated faith and broken ties, the mind experiences a grateful repose in the contemplation of long and uninterrupted friendship.

Of all men, perhaps Sir William Blizard had known Abernethy the longest, and loved him the best; and an intercourse of more than half a century had only served to cement a friendship entirely reciprocal with sentiments of increased respect and regard.

Sir William had been one of the first to excite in Abernethy that love for his profession which led to such brilliant results. He had witnessed his career with all the pleasure that a teacher regards the success of an early pupil, and no doubt with that satisfaction which is inseparable from a prediction fulfilled. He had lived, also, to receive a public and affectionate tribute of gratitude for his early lessons, when Abernethy was in the zenith of his power.

Sir William, however, lived nearly a century, and was still alive and well, when Abernethy's sun was setting, and when that fire which he had been the first to kindle for such useful and benevolent purposes was soon to be extinguished for ever.

When Abernethy retired from the College of Surgeons, Sir William was requested to draw up the memorial in which his services were to be recorded.

These circumstances invest even formal documents with an unusual interest; and we therefore trust that Sir William's encomium may not be thought an inappropriate conclusion to our humble story.

This almost ancient friend and early instructor observed, of Abernethy, "that his life has been devoted to the improvement "of the healing art. His luminous writings breathe simplicity, "humanity, reverence of truth, and disdain of worldly art; and "have placed the art and science of surgery on the permanent "basis of anatomy and physiology; whilst the contemplation of "his character excites emulative ideas of public virtue in the "cultivation of useful knowledge."

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